

COUNTRY LIFE, October 6th, 1917.

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COUNTRY LIFE

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COLONEL SIR ARTHUR LEE, K.C.B., M.P., AND LADY LEE.

COUNTRY LIFE

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COUNTRY LIFE & COUNTRY PURSUITS

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DYNAMITE AND RECLAMATION

OUR agricultural readers, and particularly those who are interested in forestry, will read with keen attention the article on high explosives and reclamation of waste land which appears in another part of the paper. It is from the pen of M. Vendelmans, who, as our readers know, is at the present moment directing important reclamation work on the Dartmoor property of the Duchy of Cornwall. The idea of experimenting with high explosives arose during the course of a conversation with a leading representative of the famous Dupont firm, which has carried out a great deal of work with explosives in the United States. The outcome was that the firm of Nobel in this country arranged to carry out a number of experiments on Dartmoor with the twofold object of showing what help to cultivation could be given in this way and the varying character of the explosives that could be used. The experiments are very clearly described by M. Vendelmans, who is highly pleased with the result. Hitherto in this country experiments with high

explosives have not been of a very satisfactory description. Some years ago they were employed on an estate in Cheshire, but the manipulation and control had not been advanced so far as they have now, and the landowner concerned was rather disappointed. He did not proceed with this method of cultivation. In several other parts of the country dynamite was utilised for the destruction of tree stumps, and there were sporadic attempts to show that it could be made useful in various ways. In the meantime our American friends had taken the matter up seriously and reduced the hitherto rather speculative efforts to definite shape and form, so that work could be taken and executed to the satisfaction of all concerned. In the experiments on Dartmoor it should be noticed that there were many failures, partial or complete. This was not to be wondered at, considering the novelty of the work and the want of familiarity with it on the part of the assistants. But perseverance was ultimately rewarded, and it is safe to say that high explosives can now be manipulated on Dartmoor with the greatest effectiveness and precision. What gives additional importance to this step forward in husbandry is that after the war Great Britain, like all other belligerent countries, will be in the possession of more explosives than are needed. The factories must be kept at work even after the first steps towards peace have been made, because there will always be the danger of negotiations breaking down and hostilities starting anew, as was the case in the Balkans a few years ago. Thus it is inevitable that there will be in the country a large quantity of explosives available for other than military purposes.

It will be readily understood that this is welcome news to us. In the deliberations of the Commission which was appointed to draw up a settlement scheme for soldiers it was asserted that reclamation in its earlier stages at least was merely navvy's work. The statement was evidently made by someone entirely ignorant of the processes connected with modern reclamation of the land. But there is no doubt of his having expressed a very widely held opinion. On the other hand, we have always tried to show that the difference between modern reclamation and that undertaken by our forefathers lies chiefly in the fact that the latter was a matter of mere force. The farmer first stubbed and drained the waste, then ploughed and reploughed, and manured for a long series of years till he succeeded in producing a fertile soil. That is on the supposition that his slow, laborious task ended successfully. Modern reclamation is the very opposite. Its success has been almost entirely due to the application of scientific methods. At first this was largely a matter of artificial manures. The skilled agriculturist who understood the chemistry of the soil was able to say what could and what could not be added with advantage.

But that was not the end. Improvement having begun in one direction rapidly spread to others. Much of the first land brought in was ploughed up by teams of bullocks in the ancient primitive style. Then a snorting steam engine appeared upon the scene and the bullocks found their occupation gone. After that came the self-contained motor plough and various kinds of tractor ploughs, with a vast variety of other machinery, each item of which was intended to reduce the cost of consumption either by substituting mechanical for hand labour or by increasing production. It is partly owing to these causes that on reclaimed land better crops have frequently been produced than on old cultivated soil, though the fact is one which the British farmer finds it extremely difficult to swallow. He still allows the land to dictate to him instead of dictating to the land. Another long step forward appears to be preparing now that the practical use of high explosives on waste land has been demonstrated. Very many difficulties appear to be in the way of solution. Stones are dealt with most satisfactorily, holes are dug out for trees as with a touch of a magician's wand, subsoils split up, ditches formed for drainage, and many other things done which point the way to a vast saving of manual labour and the inauguration of a new era in land cultivation.

Our Frontispiece

OUR frontispiece this week is a portrait of Colonel Sir Arthur and Lady Lee. Lady Lee, who was married in 1899, is the eldest daughter of Mr. J. G. Moore of New York.

* * It is particularly requested that no permissions to photograph houses gardens or livestock on behalf of COUNTRY LIFE be granted except when direct application is made from the offices of the paper. When such requests are received, the Editor would esteem the kindness of readers if they would forward the correspondence at once to him.

COUNTRY



• NOTES •

IMAGINATION and a fine perception of the psychological needs of British statesmanship have inspired Sir Arthur and Lady Lee's gift of Chequers to the nation. By their generosity the Prime Minister of the future will have for his official country residence one of the most typical of English houses, with walls broad-based on the foundations of the nation's history, and set amid surroundings of extraordinary restfulness and beauty. Standing on the spur of Coombe Hill where the Chilterns drop suddenly to the plain, the visitor looks down on the spot where Caractacus is said to have been born in the year of Our Lord. First Lord of the Treasury is the historic designation of the Prime Minister—the latter title was recognised officially only a few years ago—and the future occupancy of Chequers will renew a definite relation between the house and the Treasury which is bound up in its very name. Elias de Scaccario (*i.e.*, of the Exchequer), a Treasury official in Henry the Second's reign, wrote himself "de Chekers" and gave the estate its present name. Thus the wheel has turned full circle, and after nearly eight centuries the chief officer of the Treasury will write, in time to come, from his home at Chequers.

ON a later page is set out in detail the terms of the "Chequers Trust" under which this munificent gift is made, and some account of those who have made history there. This narrative and the pictures of the house and its notable art treasures will be continued in our next two issues. But Chequers has a history of our own day. For the first two years of the war it was a hospital for wounded officers, and since then has been Carbolicising Centre No. 1 of Queen Mary's Needlework Guild. Of Sir Arthur Lee's strenuous war service it is hardly needful to write here. Recalled from the front to take a prominent place in the building up of the Ministry of Munitions, he is now, as Director-General of Food Production, conducting with characteristic vigour a campaign which will assure the Nation's safety. Not the least interesting feature of the scheme is the future devotion of the farms and woods of Chequers to the purposes of an experimental station to be maintained by the Board of Agriculture. Sir Arthur's services to English farming will thus find their most fitting and enduring monument.

THE idea of the Chequers Trust and all that it means is not of to-day or even yesterday. It was developed in the minds of Sir Arthur and Lady Lee before the war, and it remained only to complete the formalities and to announce the fact at a time when the heavy burdens resting on the King's first minister are so clear to everyone. It is enough to repeat here what Mr. Lloyd George has written—that the gift is in its very essence an indication of the practical thoughtfulness which is characteristic of the givers, and that the public spirit which the scheme displays is worthy of them. Future generations of Prime Ministers will think with gratitude of the impulse which prompted this act of generosity, and Sir Arthur Lee may be assured that the public of to-day and of the future will be no less grateful. It is an act as graceful and thoughtful as it is generous.

EVERYONE who has an opportunity of influencing public opinion in any way owes it to the State as a duty to make it clear that the defences of London and the South-East of England generally are now so strengthened that danger from air raids has been reduced to a point it has never previously reached. To the inexperienced ear of the civilian population the racket caused by the heavy fire put up by the defence on the occasion of the recent raids was, at the beginning at any rate, far more terrifying than anything the enemy could do. Fortunately, familiarity with the noises has produced a calmer feeling, and those who at first mistook the screech of our shells for the wail of "aerial torpedoes" now know better. The Home Defence Command can certainly be congratulated on its success in preserving the heart of London from serious attack, and the moral effect of that is manifestly considerable. At the same time, Lord French and his advisers would be the last to claim that all has been done that can be done, and constant modifications and improvements, both in passive and active defence, may be looked for.

WE are a little inclined amid the vast hordes of soldiery and the munition-making efforts of the Home Country to overlook the splendid rally of the smaller Colonies. These scattered units of the Imperial Commonwealth have in many cases put forth efforts out of all proportion to their size, and it was well to have the reminder from Mr. Walter Long the other day that West Indian troops have fought in every theatre of war except Salonika, and that their numbers have been so great that it has not always been possible to provide transports to bring them to Europe. Jamaica, which has just been devastated for the third year in succession by a hurricane that has swept thousands of pounds worth of fruit from the banana trees and the palms, has already sent five contingents to the fighting line and has undertaken to pay £1,000,000 towards the cost of the Force.

GRACE BEFORE WALKING.

For songs the wind sings in the trees,
For sign-posts, when the dusk begins,
And little wayside sleepy inns
That serve my bread and cheese. . . .

For my Good Comrade (that's the Sun).
For map and boots and stout oak stick :
May I, a tramping heretic,
Find grace to thank Some One.

JOYCE COBB.

TALK about the formation of a Ministry of Health still goes on, but nothing is done. And yet we have in the report of Sir George Newman, the Chief Medical Officer of the Board of Education, ghastly proof of the need for urgent national measures. Half a million children are so defective in eyesight as to be unable to take reasonable advantage of their lessons. Another quarter of a million are in a relatively serious condition from diseases of the ear, throat and lymphatic glands. There are 600,000 children attending school who are ill-nourished. Sir George in his report says emphatically that every child should periodically come up for direct medical and dental supervision, and that in cases of malnutrition the child should "somehow or other" be nourished. There is, however, a further problem that does not come within his province—the children who have left school. Anyone who has had occasion to visit the shipyards, steel works and factories generally, in the North, during the war must have been struck by the vast hordes of boys employed who are little more than children, and by their generally unkempt, unhealthy, neglected appearance. The work is, admittedly, not cleanly, but the remarkable contrast offered to the grubby little male toilers by the neatness and general cleanliness of the women in the same yards is most striking.

INDUSTRIAL research has made extraordinary strides under the feverish stimulus of war. All sorts of uses have been found for matter that was formerly classed as waste by-product. One of the latest successes is in the utilisation of Natal wattle-bark after it has been discarded by the tanners. The Imperial Institute authorities, experimenting on a small scale, have found that it can be used to produce a very good quality of brown paper. The paper also bleaches to a cream tint, and there appear to be hopes of utilising it for note-paper and even for the daily newspaper. Several large paper mills have been consulted by the Imperial Institute on the subject and have undertaken to confirm the experiments on a practical commercial basis. It is a curious commentary

on human nature that nothing short of a world cataclysm should rouse us to utilisation of waste. War is waste in the material sense of the term, but out of that waste we are seemingly building a new material world as well as a new spiritual one.

THE merchant seamen of the British Empire are determined to bring about a boycott of Germany after the war. Mr. Havelock Wilson, their leader, frankly admits that he foresees great difficulties in attaining that end, but it is obvious that since the bulk of ocean shipping is British and largely, though not, unfortunately, entirely British manned, a really united stand by the seamen could bring about something so like a boycott as to be barely distinguishable from the real thing. The seafarers have every reason to feel bitter. Apart from the thousands of innocent lives that have been sacrificed at sea by the "ruthless" campaign, we now learn that the British and Foreign Sailors' Society has succoured, fed and reclothed 15,000 men from submarine and mined merchant vessels during the war. Every one of those men has a lasting grudge against Germany, and will have no compunction in enforcing any punishment in his power. How effective such action as a boycott would be may be gauged from the fact that in the last financial year before the war Germany depended on the British Empire for 19 per cent. of her export trade and on our Allies for another 41 per cent. A general refusal on the part of British seamen to call at German ports or carry German goods would strangle German trade at its rebirth.

INCREASES of pay and removal of many long-standing grievances in both the Navy and the Army have been agreed to by the War Cabinet. They have not come any too soon. The state of feeling in the Navy in particular in regard to these matters has been at fever heat for many months past, and Mr. Lloyd George's professional advisers have been very earnestly impressing the seriousness of the position on him ever since the early summer. Into the nature of the concessions made it is not necessary here to enter. They are largely technical, but the point that will strike the civilian taxpayer is the fact that he has to provide another £50,000,000 a year. In the lump that sounds enormous, but divided among the entire population it only amounts to a weekly payment of about sixpence by every man, woman and child who is not in the Fighting Forces for the security and the peace in which the country has existed, and will continue to exist, throughout the turmoil of the greatest war in the world's history.

MR. WINSTON CHURCHILL as Munitions Minister has scrapped the leaving certificate, and there is much to be said in favour of the new move. The leaving certificate has been a cause of great irritation, since it practically involved the workman in all the obligations of compulsory service that bind a soldier, but left him also a certain illusory freedom of civil life. It was, however, a measure that really appeared at the time of its introduction to be needed, for certain classes of labour ebb and flow at their own sweet will, with no permanent resting place, and in war continuity of effort is imperative. It is possible that the attention of these classes of labour has now been sufficiently set on the difficulties of national output to make the removal of the restriction both practicable as well as advisable.

OFFICIAL seed-testing, on which can be based a guaranteed purity and germination both for farm and garden seeds, is one of those reforms which have lagged in England, to the great detriment of food production. During the past season not a few of the crop failures were due to the wrong seed having been sown. Seedsmen are apt, sometimes in ignorance, sometimes for less worthy reasons, to misdescribe kinds and varieties. Autumn seeds planted in spring are almost bound to give disappointment. Agriculturists will therefore give a hearty welcome to the Government Seed Testing Station now being established at 72, Victoria Street, and the Food Production Department will doubtless follow this up with some measure of control. At present Zurich is the greatest testing centre in the world, though almost every foreign country and many of our Dominions provide this protection for the farmer. It is high time that England, which is the greatest seed-broking centre, should have the means of setting a standard alike for England and the world. Ireland and Scotland have long had testing stations, but recourse to them has necessarily remained purely voluntary, while England did nothing.

Now that England has come into line, it should be possible to set up a scheme of control, which might afterwards be made uniform throughout the Empire. It is a great agricultural reform.

FOR some weeks rumours have been afloat as to an imminent and drastic control by the Government of compound fertilisers. At present the law compels manufacturers to disclose how much nitrogen, phosphates and potash are contained in a mixture, but the Fertilisers Act was an incomplete measure. The farmer never knew whether these essential constituents were in such a form that the soil would assimilate them, and being an unscientific person he went on buying So-and-so's patent turnip manure as his father had done before him, blissfully ignorant as to whether it was worth £6 or £8 or £10 a ton. A dealer could charge him anything he liked provided he gave the percentages of the three chemical constituents. It is the kind of protection that is worse than none at all. A vast amount of rubbish has been sold as fertiliser which did no more good to the land than brickdust. Now that the Government controls the prices of the principal sources of nitrogen and phosphoric acid, the Board of Agriculture has the chance to strike a shrewd blow for the protection of the farmer and in the interests of common honesty. A good many of the Orders issued by the Departments are tiresome and even unnecessary restraints on commercial enterprise, and we are no lovers of Orders as such. In the case of fertilisers, however, a reasonably drafted Order would be of inestimable value to the farmer, and it is hoped the Board's intentions have been correctly divined.

FAR, FAR FROM HERE.

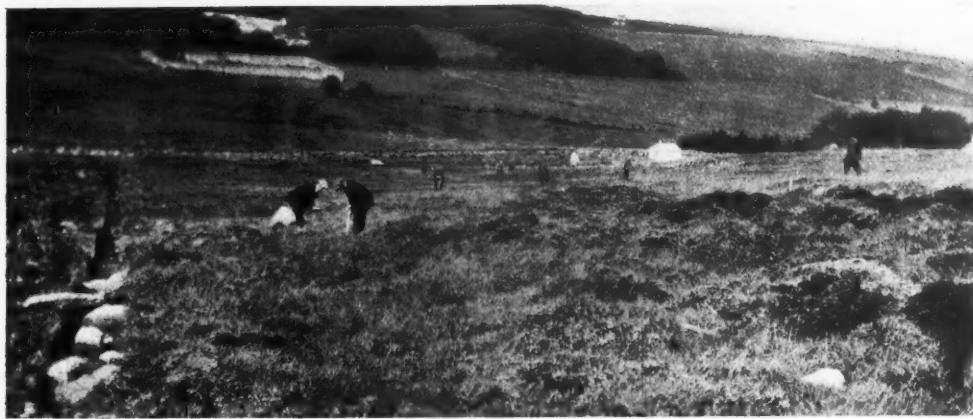
Dear England, land of hedges and sweet sights
In spring-tide lanes, of cottage lavender,
Of glowing hours bee-hummed on shadeless heaths,
Of autumn woodlands garlanded with bine
And berries red, soon, in thy winter days,
Land of wood-scented hearth and misty silence—
England, I love thee in the open, all
Thy life of marsh and meadow, all the peace
That lingers in thy gardens green and gay,
The opal of the sunsets and the clouds
In thy fast-shifting skies; I love thy birds
And all the little children that run by
In lane or street with blue un-written eyes—

But not within thy bosom shall I lie
When I am dead: far, far from here my bones
Shall find a grave in Poland's outraged earth
Amid the ghosts of all her slaughtered forests,
Of all the golden harvest-oceans gone . . .
Yet where I lie I shall not hear the tramp
Of foeman and usurper, I shall hear
The footsteps of to-morrow's children, free
And glad . . . then all the little murdered ones
That lie in tens of thousands there shall smile
With me to hear those myriad happy feet . . .
And in the old earth from our dust shall spring
New harvests and new forests and new love.

LAURENCE ALMA TADEMA.

SET very modestly in the columns of last week's papers was a paragraph which deserved more notice. Hundreds of thousands of citizen soldiers will be proud of a recognition of the fighting Territorials which places them on the level of the Regular Army by one very significant act. Territorial battalions will in future bear upon their colours the honours won in elder days by the fighting regiments of which they are units. It may seem a small thing, but it means much to the soldiers. By what rich devotion the honour has been won may be read any day in the brilliant narratives of war correspondents, and just lately by another happy innovation, in Sir Douglas Haig's daily messages, which now reveal the county names. It is pleasant to think of the days to come when the colours of Territorial battalions will hang, first in the regimental mess, and at long last in the aisles of cathedral or parish church. By His Majesty's late command they will bear the enwreathed names of a score of stricken fields in France and Flanders and the East, linked with such ancient honours as Namur 1695, Blenheim, St. Sebastian and Waterloo, all symbols of the unwearying struggles of the British race for freedom through the centuries.

HIGH EXPLOSIVES AND THE RECLAMATION OF WASTE LAND



DRILLING SHOT HOLES.

BESIDES the considerable amount of high explosives which will have to be brought back from the Continent when this war is over, there will exist a tremendous stock in this country, far in excess of the actual requirements of the mining and quarrying industries. Among the uses suggested for this surplus is the reclamation of waste land. Up to to-day the question of the application of high explosives to agriculture has not yet been completely investigated in this country. With a view to furthering the solution of this problem experiments are being conducted on the property of the Duchy of Cornwall at Dartmoor. Some time ago a scheme of proposed experiments was submitted to the Nobel's Explosives Company, Limited, of Glasgow, whose management agreed to supply the material and to give any further practical assistance required. This programme of experiments included a great number of operations, according to the various results aimed at, while, for each result aimed at, several trials were to be made before coming to a final decision.

From the experimenter's point of view this really constitutes the interesting part of the operation. The field to be treated is open moor. The soil is peaty on the top, overlaying a shallow, impervious layer of blackish gritty soil, which is underlaid itself by good brownish soil resulting from the

decomposition of granite. The quality of the soil is fairly equal over the whole of the field except in the part which is to be used as a plantation. Rocks are met with both above and underneath the surface.

The different blasting operations had for their object to find out the best way of making open ditches for the evacuation of rain and surface water, and to determine the proper way of treating the soil for arable, for pasture and for afforestation. A single glance at the conditions will show the interesting points of the experiments. Stones were broken up, lifted out of the soil, or at any rate, loosened in the soil, which greatly assists ploughing. The subsoil is pervious and fertile. It would certainly be advantageous to mix it with the top soil, or at least to break the impervious layer, which would admit the roots to the subsoil, as the top soil is thick enough to prevent the

plough going through the impervious layer, and the addition of a subsoiling implement to the plough is not possible because of the presence of stones and rocks.

First of all it was intended to blast ditches 3 ft. wide at the top and 2½ ft. deep. Then trials were to be made of blowing up the soil for a depth of 2½ ft., of 2 ft. and of 1½ ft. respectively in order to ascertain the quantity of explosive required to mix the subsoil with the top soil, breaking at the



ATTENDING TO THE PRIMING OF A CARTRIDGE.



BINDING TWO CARTRIDGES TOGETHER.



A LESSON IN DRILLING SHOT HOLES.



DRIVING THE CHARGE HOME.



TAMPING THE HOLE.

The depth of the hole is marked on the crowbar, and the holes are made in a line at distances indicated by a string.



BLASTING A TREE HOLE FOR THE ARBORETUM.
Second experiment. Unsatisfactory result.



BLASTING A TREE HOLE FOR THE ARBORETUM.
Ninth experiment. Good result.



EXPERIMENT IN DITCHING WITH GELIGNITE.
Good results. The effects of a former unsatisfactory experiment may also be seen.

same time the impervious layer. After that trials were made for simply lifting the soil without mixing it up to any great extent, with the object in view of making the soil perfectly pervious to the depth of $2\frac{1}{2}$ ft., 2 ft. and $1\frac{1}{2}$ ft. respectively. The difference between these two methods is very important. They are both in connection with soil to be turned into arable. On soil for grassland the same trials were repeated, so that the effect of all these different treatments will be tested by the growth of two entirely different kinds of crops.

On soil for afforestation the trials were to be slightly different. In some cases single holes were blown $2\frac{1}{2}$ ft. deep at a distance of roods apart, the space between to be planted with underwood. In other cases a continuous line of holes was blasted so as to render the soil pervious in strips. In other cases still, deeper ($1\frac{1}{2}$ ft.) and shallower lines were blown up alternately. The experiments for simply lifting the soil were to be repeated under similar conditions.



BLASTING THE SOIL—A GOOD RESULT.
Fifty charges were exploded at once.



THE EFFECT OF THE BLASTING.

The use of the explosives must be preceded by making the holes which are to receive the charge. These holes are very easily made by the use of a crowbar or, preferably, an iron jumper, which is sharper at the end, the holes being drilled to a sufficient width. It is very important to make all the holes an equal distance apart and of the same depth, especially where simultaneous explosions are concerned, so as to produce a perfect co-operative action of the charges one with another. The depth of the holes is marked on the jumper or crowbar by the use of chalk.

The following implements and materials are required to perform the various operations: High explosives, a chisel and mallet for opening the box of explosives, electric or time-fuse detonators—in the latter case, nippers to cut the time-fuse, to fix the time-fuse into the detonator, to cut the connecting wire, and to prime the cartridges ordinary or, preferably, fuse matches when ordinary time-fuse;

are used; crowbars or jumpers for drilling the holes; connecting wire when simultaneous explosions are to be made; a twin-firing cable when electric detonators are used; an electric exploder; a galvanometer to test the electric detonators.

The most suitable of all high explosives is gelignite, containing 40 per cent. or 50 per cent. of nitro-glycerine. In this case the 50 per cent. was used. It is a very powerful explosive, developing about 900 Foot Pounds pressure per square inch on explosion. The force of the explosion is spread equally in every direction. At the same time it is very safe to handle, and when the ordinary precautions are observed no danger whatever is incurred. It can be stored for

explosions. Where a certain number of shots must be fired it is worth while to use the electric detonator, because even where single shots are concerned the connection is made quickly. But when several holes must be fired simultaneously it is necessary to use it, because this alone will ensure the co-operative action of one charge with another. The electric detonator is provided with a double wire made about the length of the depth of the holes. These wires are covered with cotton and waxed so as to prevent short circuits.

When holes are 5yds. apart single shots should always be fired, because simultaneous firing would require much connecting wire and the connection would take a long time. When holes are closer together they should be fired in series. When using cartridges fitted with time-fuse the charges must be put with the detonator upwards, and the cartridge must be dropped to the bottom of the hole. Electric detonators are generally put detonator downwards to prevent it slipping out of the cartridge.

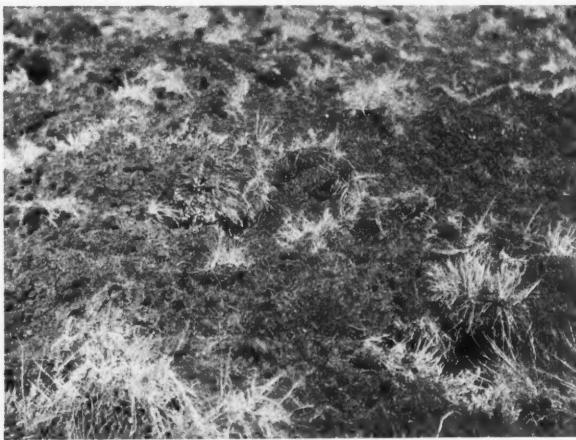
With electric detonators the cartridges are brought "home" by using the tamping rod: a practical way of doing this is to hold the finger on the rod at the depth of the hole when it is tested before dropping the charge. Then the difference between the depth before and after indicates if the charge is at the bottom.

The first trial was made to find out the practical way of blowing a ditch 3ft. wide at the top and 2½ ft. deep.



EXPERIMENT IN LIFTING SOIL AND BREAKING HARD PAN.

Fifty shots fired simultaneously.



RESULT OF LIFTING THE SOIL.

Note the small holes in the ground.

a long time without undergoing any deterioration. There is but one inconvenience attached to it: when handled it must be left in its paper wrapper, because it is apt to cause headache when touched with the hand. The cartridges are made to order of the size and weight to suit requirements. They are packed in wooden boxes containing 50lb. each. A chisel and a mallet are used to open the boxes on the spot. The gelignite, like every other high explosive, requires a detonator to bring about the explosion.

There are two kinds of detonators—the time-fuse and the electric detonator. Moreover, there are two varieties of electric detonators—the ordinary one, generally used even in damp soil, and the submarine detonator, used when explosions are to be made in very wet soil or in ditches filled with water.

The time-fuses are sold in reels of 25yds.; they are cut on the spot to such length that the end comes some 3ins. or 4ins. above the soil. They are fixed inside the detonator by closing the upper part of it with the special nippers and are lighted by using a fuse match or by inserting in the top of the fuse a small piece of gelignite cut from another cartridge, which piece is lit by an ordinary match.

Time-fuses can only be used for firing single shots, in cases where no co-operation from other shots is required to attain the desired object, such as when blasting holes for standard trees, tree stumps and small rocks. They are not so safe as the electric detonators because sometimes misfires occur and accidents may result from delayed



DRILLING HOLES IN ROCK.



ROCK AFTER BLASTING.

Some large cracks can be seen, and many other smaller ones are there, making the removal of the rock an easy matter.

It took considerable time and several trials to come to a satisfactory result—various depths of holes, slanting and straight, charges in single rows, two charges abreast, charges placed zig-zag, charges placed at various widths apart, and various quantities of explosive per charge were tried. The single row charge, the charges being placed 2ft. apart, proved to be the best, and will be adopted for the execution of the work. The result was a fairly regular straight ditch of equal width well thrown open, and which only needed a single passage with the shovel, to take out the finely broken up soil at the bottom, to finish it off—the soil was broken up about 6ins. below the charge. The method of blasting tree holes was decided more quickly. This was especially

a matter of quantity of explosive. To blow the hole well open one cartridge was required ; to break the hard pan sufficiently and break up the soil only half a cartridge was necessary. This will be sufficient in practice. Hole digging for trees and ditching generally take a considerable time and require much and hard labour by using ordinary means. In this fashion even two partly disabled men can easily and quickly do all the operations. That is a great advantage over the ordinary method. Moreover, in the case of tree holes the soil and the subsoil are fairly well mixed, so as to provide good planting earth.

In blasting the soil—the holes being 5ft. apart at 2½ft. deep, 4ft. apart at 2ft., and 3ft. apart at 1½ft. deep—the result was very satisfactory as far as the breaking of the hard pan and the mixing of the soil were concerned. The soil was finely broken up for the whole of the depth so that a stick penetrated easily to a distance of 6in. below the charge. This operation must evidently result in great improvement on the existing conditions, but the results on the crops cannot be ascertained before next season. The lifting of the soil under similar conditions was arrived at after a few experiments, and completely realised all expectations ; but here again the results must be submitted to the test of cropping. As the cropping is going to be done with cereals, roots and grasses at the same time, in comparison with other crops on soil not treated, the value of the operation will be settled next season.

In rocks to be blasted holes must be drilled. Up to now hand-drilling has been done. In this case two men are able to do only about fourteen holes a day, according to the depth. This process is too slow, and a portable pneumatic drill, worked by a motor, is now to be used. This drills a 5in. hole in a minute—as big stones sometimes require three holes, this will speed up the work considerably. The hole must be drilled in the rock at 3ins. below the centre, so as to distribute the pressure equally over the rock. As a matter of fact, the explosive acts equally in every direction, and full results can only be attained by balancing the charge.

While the charge is being driven home the wires of the detonator must be held in the hand so that they are kept straight along the side of the hole. This prevents them from being damaged by tamping. A good stemmer or tamping rod is a broom-handle with rounded end. It must be cut to a length

roins. longer than the depth of the holes. Tamping must be done carefully ; earth is used for the purpose, but it is advisable to avoid stones and grit as they might injure the time fuse or the wires and prevent the explosion. It is not necessary to tamp the soil tighter than it is round the hole, and it is advisable not to tamp the bottom of the hole too hard. The time-fuse is then ready for firing. The electric detonators to be fired in series must be joined by connecting wires. When the number of rows of holes is even they are connected to one another ; when uneven the two last rows are connected in zig-zag, so as to bring the two outside wires as close together as possible.

Then the two outside wires are connected with the twin shot firing cable ; this cable has a length of 300ft., which is more than sufficient for the operator to stand outside the danger zone. The cable is only connected to the two poles of the exploder after these preparations—and never before—so that all accidents are avoided even with inexpert hands.

The soul of the exploder is a magneto, in which current is produced by turning it quickly by means of a handle. There are three or more kinds of exploders : The Atlas exploder can safely fire fifty shots at a time ; it weighs about 40lb. The Twist exploder fires thirty shots ; it weighs about 30lb. The Sextet exploder fires six shots at a time : this is very light, weighing only about 7lb., and is easily put into one's pocket, and so carried about. This will do for tree stump and rock blasting, also for blowing out tree holes.

When important work is on each electric detonator is separately tested by using the galvanometer. If the detonator is right the needle of the galvanometer moves when the two ends of the wires are brought in contact with the poles.

With the electric detonator no charges are left unexploded. Always, when firing, stand on the side whence the wind blows, so that the débris is driven away from the operator. This is very important.

Ditching and tree hole blowing may be adopted in many cases, as after the war prices of explosives will go down at once ; while for the treatment of the surface or parts of the surface for cropping purposes the results arrived at show that in many cases there will be a real opening for the use of high explosives in the reclamation of waste land.

H. VENDELMANS.

THE NEW FOREST

There's magic in the Forest names, the hearts of men to hold !
 Ocknell, Bramshaw, or Bolderwood—Setthorns, or Burley Old—
 Markway Bridge, and Wilverley—to the mind and heart bring back
 The tread of a horse on heather, the winding forest track,
 The glistening green of hollies under a dripping sky,
 Hounds in a sunlit covert—in the open, in full cry !

Forest names and Forest ways, forge a spell so strong

It shall hold man's careless heart—howso' life be long.

There's magic in her lights and shades—the colourings of her year—
 From Spring that buds the glorious oaks, unfolds the beech-leaf clear,
 And piles the treasure of the gorse for all the world to gain—
 Through Summer with her shimmering haze, and heath-empurpled plain—
 And Autumn, treading freely the Forest's breadth and length—
 To Winter, when the stripped trees stand sublime in form and strength.

Forest gleams and Forest depths, weave a golden thread

That shall twine through a man's life—till that life be fled.

The glamour of a thousand years—the subtle, potent spell,
 Who shall escape (who would escape !) that in her borders dwell ?
 Ride up to Picket Post, the hill where Roman, Norman, stood—
 Mark you, as they, the billowy heaths surge up to meet high wood ;
 Pass through enclosures deep that store, through centuries, for aye,
 The echoes of the hunter's horn, that rings the stag at bay !

Forest sounds, and Forest scents—thus her magic grew—

Thus she holds her people's love—the old, for ever New.

E. M. MILLS.

REVIVAL OF WOODEN SHIPBUILDING

BY HAROLD J. SHEPSTONE.

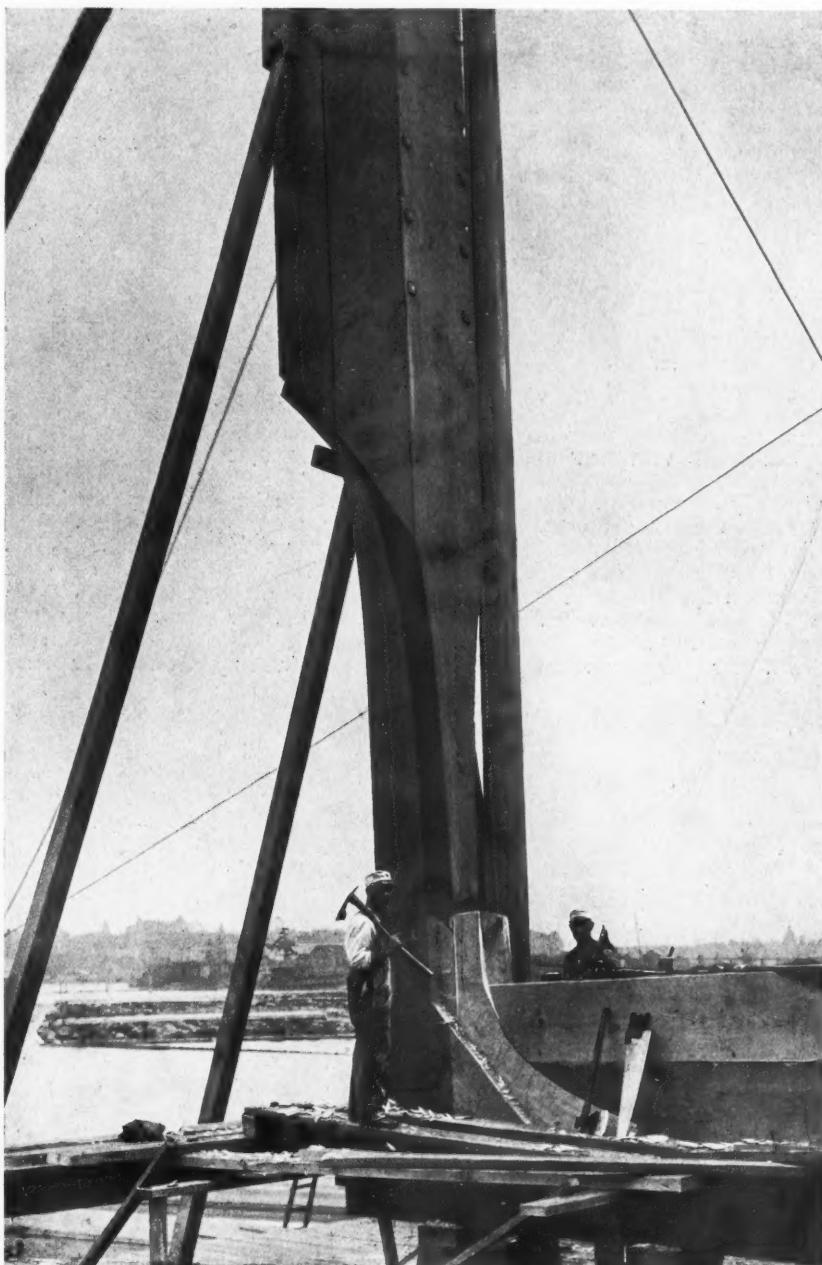
THE necessity for ocean commerce carriers to make up the shortage caused by the great number of vessels of all nations destroyed by German submarines has had the unexpected result of reviving the almost obsolete industry of wooden shipbuilding. Virtually the only yards, prior to the war, that were turning out wooden ships of large size—that is of 2,000 tons and more displacement—were those on the Pacific Coast of North America. Generally speaking, these vessels, of the schooner type, were mostly designed for the rough work of lumber carrying. As the war progressed and ships became scarce and freights high, the yards of Vancouver and Victoria, in British Columbia, showed what they can do by building some magnificent ships capable of carrying about 2,000 tons weight of cargo. Within eighteen months or so of the war many yards, both on the Pacific and Atlantic Coasts of North America, which had hitherto aimed at nothing more pretentious in the way of wooden ships than small tug boats and lighters, began to build ocean-going vessels of wood.

Whether it was the success that attended the enterprise of these yards in supplying a type of vessel that was badly needed, both expeditiously and cheaply, that gave the Americans an idea one cannot say. Be that as it may, one of the first acts of the American Government when it joined us as an ally was to pass an Act authorising the formation of the United States Shipping Board Emergency Fleet Corporation with a capital of 50,000,000 dol. and then boldly plumped for the building of 1,000 wooden ships of 5,000 tons displacement and capable of carrying 3,200 tons gross weight of cargo, the whole fleet to be ready and in commission by January 1st, 1918. The result was electrical. Hundreds of old yards where wooden ships were built many years ago, but long since abandoned, were resuscitated and hundreds of new yards opened. To-day the whole American coastline on both oceans, from Maine to Texas and from Puget Sound to San Francisco, echoes to the clang of the hammer and the thud of the lumberman's axe. In a like manner wooden

vessels are being hastened to completion by the score in the yards of British Columbia, on the great lakes, and in Eastern Canada. The two ports of Vancouver and Victoria in British Columbia have at this moment some eighteen large wooden vessels on their stocks. Although these craft are being built to meet a pressing war need, there is a romantic impression attached to the wooden ship that appeals to the popular fancy, and the revival of wooden shipbuilding is looked upon in many quarters with favour, and not a few experts declare that as a result the industry will be rehabilitated and the days of the wooden ship will return.

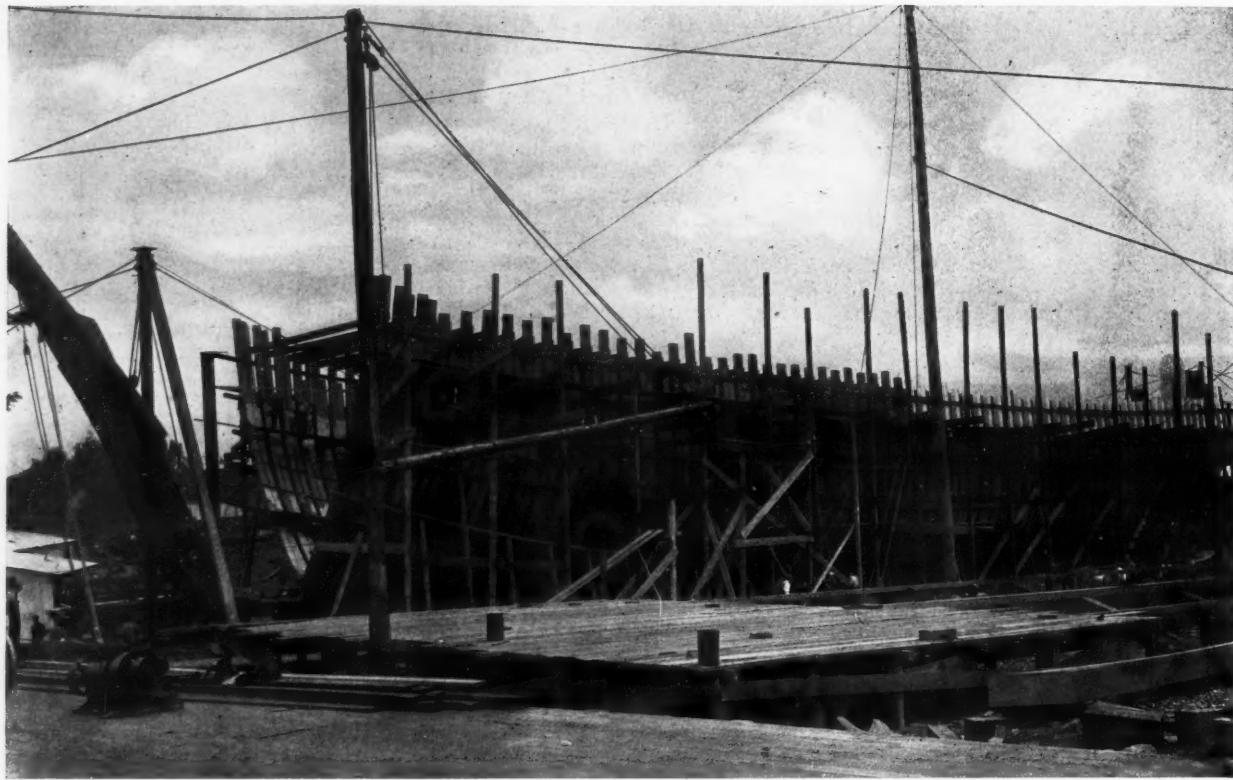
The art of building craft of wood is as old as history, and it is curious to note that many of the structural methods employed by the Greeks 400 years before the Christian Era are still followed; thus we find the keel, the floor timbers of the frames, over which is placed the keelson, the curved stem, secured to the keel by the apron, and the thick wales for strengthening all in the timber-built ship of to-day are in practically the same form as in the triremes of Athens ages ago. Moreover, in many of her parts the timbers are held together by wooden pins, after the custom of centuries. This does not mean that the art of shipbuilding has not improved, but that in some things the old builders had already devised the best methods of doing the work.

It has been said by the modern expert that the wooden ship is a patchwork. To a certain extent this is correct, and is due to the limitations of the material employed. Not to go minutely into the details of construction, a brief sketch of the building of a ship of wood will give an idea of its character. Upon a suitable foundation the keel of heavy timbers is laid down in the longest lengths available, but as it is impossible to get a timber of sufficient length for a vessel of 3,000 tons carrying capacity, which is the size of the emergency ships now being built, it is necessary to "scarf" several pieces together. At the bow the stem is set up, a deep timber extending from the keel to the upper deck, and with the grain running as near as possible parallel with the desired curve.



THE STERN POST OF A LARGE WOODEN OCEAN CARRIER.

It weighs over half a ton.

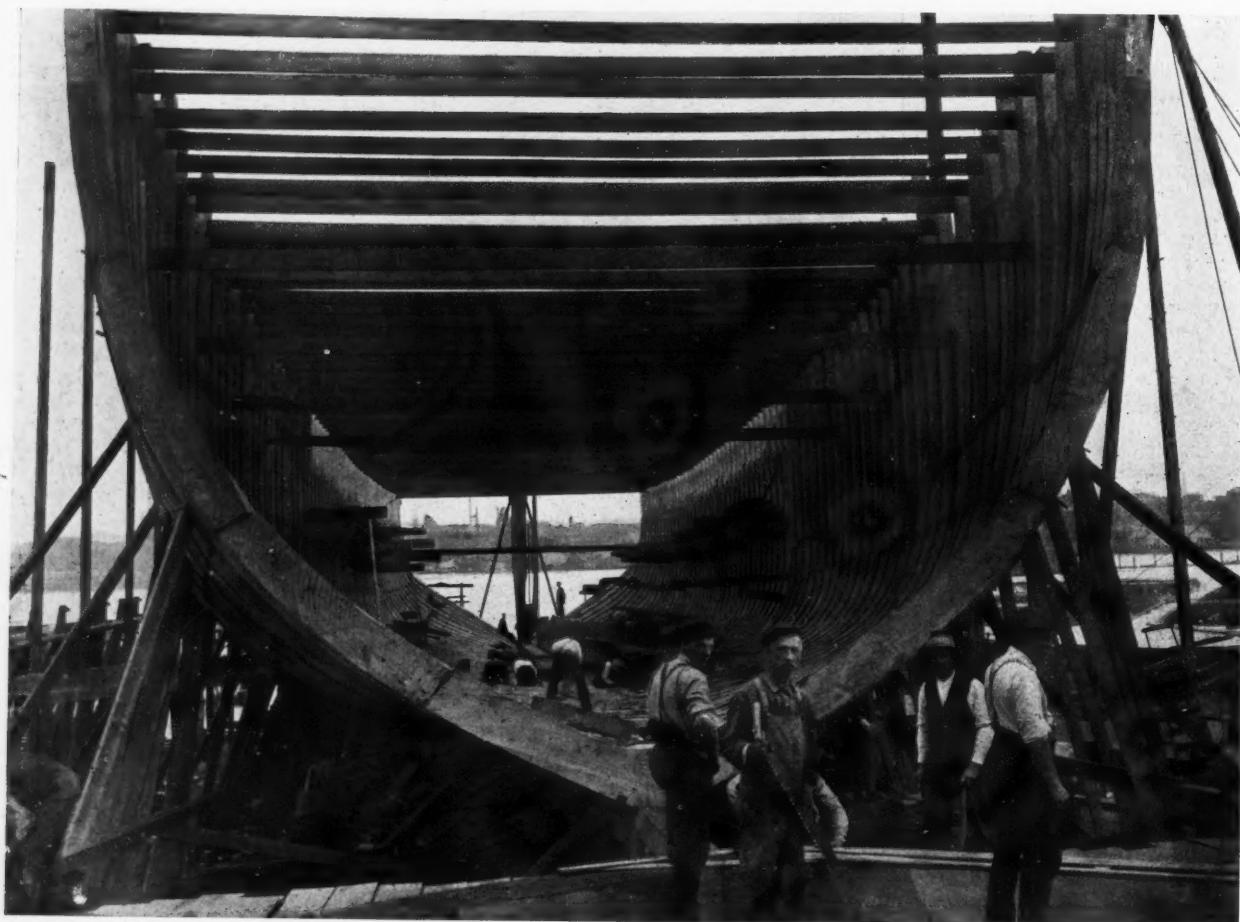


A GENERAL VIEW OF A 300 FOOT WOODEN SHIP FROM THE STERN.

As we cannot get a piece of timber with a natural crook at the lower end to round into a keel it is necessary to insert a filling piece at this point, and the double joint here is bridged over by a curved piece of timber called an apron, which is bolted on the inside to the stem and keel.

The stern post, which is a straight vertical timber, is easily attached. Across the keel are laid the "floor timbers" of the frame in pairs, and over these is placed the keelson,

a heavy timber similar to the keel. Iron bolts are driven through the three parts and headed over at each end to clinch the structure together into as nearly a homogeneous mass as possible. Usually in a vessel of considerable size a number of timbers are worked to form the keelson, making a solid mass of material several feet deep in order to furnish vertical strength and stiffness to the bottom of the vessel. The frames are next built up of three, four or more pairs of timbers on



LARGE WOODEN SHIP IN COURSE OF ERECTION AT THE CAMERON SHIPYARDS, VICTORIA, BRITISH COLUMBIA.

each side, arranged so that the joints between the ends of two successive pieces of one member of the frame alternate with the joints of the other member, and the two members of each frame are secured strongly together by iron bolts driven through and clinched. In place of these bolts it was formerly customary, and the method has not yet been abandoned, to fasten the parts of the frame, or ribs, together with tough wooden pins, or treenails, which were driven through holes bored for the purpose; the ends of these pins being split and expanded by wedges of soft wood, which swells with moisture, acquire a strong hold on the timbers. For securing the planking these same treenails are largely used, and they are one of the principal links that connect ancient and modern methods of shipbuilding.

For sheathing the vessel the longest planks obtainable are used, and the joints at the ends of the planks are distributed as far apart as possible; moreover, at some points extra thick planks, termed wales, are used, and corresponding to them, on the inside of the frames, similar timbers, or stringers, are placed, and treenails or bolts, are driven through all. An inner ceiling of heavy planks is also worked the entire length of the vessel. The framing of the decks is of heavy timber to add to the strength of the structure; and to stiffen it and to assist in preventing the vessel from twisting, strong knees are bolted in the angles between the deck timbers and the sides of the ship, both horizontally and vertically. These knees are natural crooks, cut at the junction of a large root or branch with the trunk of the tree.

Some idea of the timbers required for these emergency ships will be gauged by the dimensions of a recently designed ocean-going carrier, built in the yards at Victoria, in British Columbia, of which we give several illustrations. The vessel is 300ft. in length over all. The keel is 20ins. by 20ins.; the stem 20ins. thick and 20ins. deep; stern post 20ins. by 24ins. The frames are double, spaced 30ins. from centre to centre, and each timber is 26in. deep by 12ins. wide at the keel, 20ins. deep at the lower turn of the bilge, 17ins. at the upper turn, 12ins. at the main deck and 9ins. at the rail. The main keelson is 20ins. by 20ins., and the rider keelson the same size. Three sister keelsons 20ins. by 20ins. are fitted on each side of the keelson. The first stroke of planking next the keel is 9ins. thick, the next is 7ins. thick; bottom planking 5ins. thick; wales 6 $\frac{3}{4}$ ins. thick and top side planking 6ins. At the turn of the bilge there are five strokes of ceiling, on the inside, 14ins. by 14ins., and three strokes 12ins. by 12ins. Above the bilge the ceiling is all 10ins. thick. All of these timbers are piled up, layer on layer in an endeavour to make the hull stiff enough to hold its shape, and fastened together by strong iron bolts and treenails. It is undoubtedly something of a patchwork compared to the slender sides and bottom of a ship built of steel.

Much has been said of the simplicity of a wooden ship, and that little skilled labour is required; but this is far from the fact. Of course, modern machinery has replaced much of the hand labour that was formerly necessary, but there are still many operations where experience and special training are necessary. By systematising the construction of the framing it is now possible, by the use of circular and band-saws, to produce by machinery many of the curved frame timbers that formerly had to be wrought by hand; still there is much work about a timber ship that must be done by the skilled hewer with the axe and adze. An expert adzeman will hew a plank down to a thickness of less than a quarter of an inch and have it smooth and of equal thickness throughout.

The ships of the emergency fleet now being built in the American yards will be of a standardised pattern from the plans of Mr. Theodore Ferris, the American naval architect. They will have a length of about 350ft. and, as already stated, will have a carrying capacity of 3,200 gross tons of cargo, or a total carrying power of over 3,000,000 tons. It is computed that each vessel will require 1,200,000ft. of lumber. Those built on the Pacific Coast will be of Douglas fir, a wood which is virtually as durable as oak. Experience has shown that such ships can be built and commissioned in six months from the time the keel is laid. Many yards, in fact, have turned out craft of this size in four months. How many ships are now actually under construction and what progress has been made is not known; but it is understood that every effort will be made to have the 1,000 ships ready by January next.

The vessels will be propelled by reciprocating engines and also by turbines, driving single and twin screws, and oil will be used as fuel. It is planned to give these hulls a speed

of ten knots in ordinary passage, but to provide them with boilers sufficiently oversize to allow a forced draught to extend this speed to twelve knots. It is well recognised that, inasmuch as many enemy submarines have a surface speed of seventeen knots, it is hopeless to try to make the emergency fleet with heels swift enough to be shown to the enemy. All that can be done is to give them the average speed of the average cargo vessels and to provide them with ample means of defence in the form of guns. This part of the plan is being worked out by the Navy Department, which will provide the ordnance and ammunition by which these cargo carriers, designed to beat the submarine by carrying food and material across the water faster than the submarines can sink them, will also become, perhaps, offensive war vessels as far as submarines are concerned. Each vessel, too, will be equipped with a powerful wireless apparatus, and carry a crew of thirty-five hands. It is rightly proposed to make the accommodation for the crew both capacious and comfortable so as to attract men to the service.

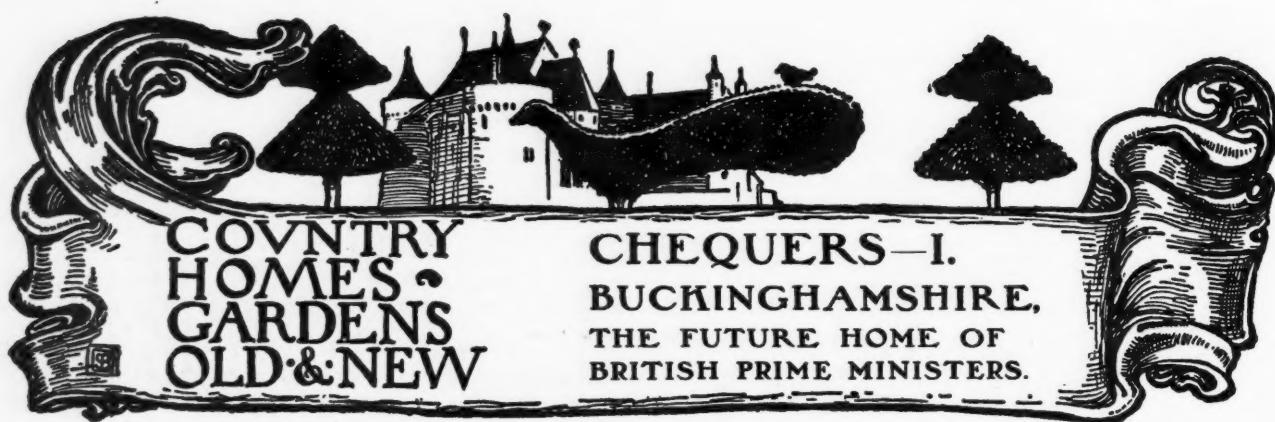
THE ASPIRATIONS OF ITALY

THAT a stable peace in Europe cannot be ensured without the just satisfaction of the essential legitimate aspirations of Italy is the main text of Mr. Wallace's book, "Greater Italy" (Constable, 10s. 6d. net); and by considering those aspirations in their historical setting, sparing no pains to understand them himself and to set them forth clearly, he makes a valuable and important contribution to one of the most difficult problems of the settling-up. The unity of Italy is a satisfactory starting-point, and at the outset the author's grasp of his subject is shown in the contrast he draws between the position and action of Piedmont as the leading state in the new Italian Kingdom, and Prussia as the leading state in the new German Empire. The latter unification was slow, artificial, forced; it began by violating—in Denmark and Alsace—the principle of nationality. The former, on the other hand, based not less on sentiment than on interest, was natural, popular, comparatively rapid, and so complete that it is justly said that "Italy blazed the track of a national racial unity, and set the world thinking along the lines of nationality." Mr. Wallace next discusses, dispassionately and with true historical insight, the position of Italy when she entered the Triple Alliance, and her relations with the Central Empires until the rupture, first with the old foe, and then with the one-time "friend." Mr. Wallace's qualities of understanding and impartiality and lucidity are nowhere shown more clearly than in the chapters in which he traces the foreign policy of Italy during the past three decades—a policy often, as in the time of Leo XIII, made doubly difficult by the Vatican, and gradually becoming more and more complex until it reached the period of "the interpenetration of alliances."

The sequence of events was baffling. Italy at the Algeciras Conference, in 1906, chose to regard her agreements with France and Britain as more important than her alliance with the Central Empires, and she was "instrumental in bringing about the triumph of France and the exclusion of Germany from the Mediterranean; two years later Austria annexed Bosnia; and yet in 1912 the Triple Alliance was renewed by Giolitti, and for almost a year relations with Austria (so far at any rate as the Government was concerned) were more intimate than ever. But the alliance with Austria, opportunist in its inception, could never have much real permanence or strength. It was not rooted in the people's will. At first, no doubt, it greatly increased national prestige, but Italy was being "constantly rubbed raw" by the tyrannical policy of Vienna towards the peoples of the Trentino.

The relations between Italy and Germany from the renewal of the alliance in 1912 to the outbreak of the present war have not been so clearly understood in this country, and one of Mr. Wallace's most interesting and important chapters is concerned with a close enquiry into the reasons why "All Italy, save a few isolated groups, had become so frankly Germanophile." How thorough the Germanising of Italy had been is shown by the fact that the Italian declaration of war upon Germany was deferred for more than a year after the break with Austria. Looking to the future, the author can say with confidence that "the Germans will never be permitted to return," and "if intercourse with Germany is resumed after the war by Italy sooner than other powers it will only be on terms of perfect equality in pursuance of a policy of self interest." Already much of "Italia Irredenta" has been redeemed by arms. What of "Venezia Giulia" and the Adriatic? There the problem is difficult, and the sympathies of the Allies and of famous publicists are divided. The author gives us the facts accurately and with commendable fulness, but he is very, very careful in his judgments, even at the risk of overloading his sentences and becoming almost legal in his diction. There are twelve million Jugo-Slavs to be considered, and he cannot altogether whittle away their plea that if their aspirations are trampled under foot there will be a Slav "Irredentist" movement against Italy.

There is one way out, and very guardedly Mr. Wallace indicates it when he says: "It is not unlikely that Italy will be willing to forego certain territories in the Eastern Adriatic, guaranteed to her by France, Great Britain and Russia, for adequate compensation elsewhere." The general construction of this book deserves high praise. It should have a place among the histories of European states in the past fifty years.



CHEQUERS is to be the future country home of British Prime Ministers. Such is the generous and patriotic resolve of its present owners. Sir Arthur and Lady Lee came to this most delightful Buckinghamshire seat some ten years ago, and at once began conservative reparations. The principle on which they were broadly projected and admirably executed was to give back to the house, within and without, the full character and flavour of the times when it originated, while modern habits of life should find scope and gratification. Mainly built under Elizabeth, it had, as we know from family documents, escaped with scarce any alteration until a hundred years ago much money was spent in obliterating its history and its beauty under a pervading coat of mock mediæval frippery, so pleasing to its perpetrators that the unhappy place was described in 1823 as "lately fitted up in the Gothic style with exquisite taste." What this exquisite taste was like future ages may still learn through the medium of photography. Such presentment will have documentary value for a future history of the rise and fall of Art, but the relegation of the stuff itself to the rubbish heap is not likely ever to be regretted. It is well to preserve examples of every phase of architecture and decoration. There is always the best of a bad lot. Nor must we forget that man is habitually unappreciative and destructive of what the next preceding generation has done, although later on it may again be

valued. The Strawberry Hill manner may, therefore, have future devotees, but they should have left for them complete creations in that taste and not palimpsests set over a truer style. For the Gothic of 1820 was not a true style. That surely may be stated, not as a passing whim, but as a permanent principle. It imitated in paltry and superficial fashion the forms of an age of which it ignored the spirit, the purpose and the methods. It was third-rate theatricalism; not well considered creation or copying. So Chequers is well without it, for it has been replaced, as the illustrations show, by a careful return to sixteenth and seventeenth century models wherever the original fabric called for such owing to wreckage and defacement. Whole-hearted has been the attention and affection which Sir Arthur and Lady Lee have bestowed on every department and detail that make up the full entity of this complex work of art.

The structure and the decoration, the furniture and the fittings, the art collection and library, the archaeology and the amenity, the gardens and the environment—all have been reviewed and reformed so that everything that there was of the right sort should be brought to light and given full value, while only as much as was essential to complete the picture has been sympathetically introduced. The bad moment of the Gothic "taste" has passed away as a dream that leaves no trace, and Chequers to-day is





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2.—THE PAVED WAY BEFORE THE NORTH FRONT.

"COUNTRY LIFE."

[Oct. 6th, 1917.]



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3.—FROM THE SOUTH-WEST.

"COUNTRY LIFE."



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4.—FROM THE SOUTH-EAST.

"COUNTRY LIFE"



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5.—“THE AMPLE HOMELY GROUPING OF THE HOUSE.”

“COUNTRY LIFE.”

essentially as Chequers was before the last of the de Chekers blood passed away more than two centuries ago. As Sir William Anson so well expressed it in the inscription placed on the west bay of the gallery, Sir Arthur and Lady Lee

Iste locum valde amantes, ejusque fortunas vencrantes domum ipsam horis que A.D. MDCCCCIX et annis insequentibus reficiendos ornandos curaverunt.

And that done, what next? Much and good work had produced a rare and invaluable result. Was it to run constant danger of destruction or even of disruption? Could Atropos at any moment cause a chaos by the cutting of a thread of life? That the creators of so goodly a thing, on which they look with fondness and pride, have decided must not be in so far as it is in their power to prevent it. To guard against accidents, therefore, and to make the decision irrevocable, the whole property is to be deeded over at once to the Nation, to be used, when the present owners have passed away, for a national purpose under the

guardianship of the Nation's leaders in action, thought and art, who shall administer it in accordance with a broadly conceived but conservative scheme. Such is the origin and purpose of the “Chequers Trust” idea as drafted by Sir Arthur Lee with this exordium:

The purpose of this Trust is that the ownership of the Chequers Estate, with the mansion house and everything it contains, shall be transferred forthwith as a free gift (in trust) to the Nation, on the conditions that the present owners may (if they so desire) remain in occupation as tenants of the trustees, so long as they may live, and that, after their death, the house will be used and maintained in perpetuity as the official country residence of the British Prime Minister.

Even under the old order our prime ministers were not always men of large private means—did not Pitt die deep in debt? How much more is this likely to be the case in the future. It were well and honourable that the official head of the British Executive should not only have an



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6.—A PEEP AT THE SOUTH SIDE.

“COUNTRY LIFE.”



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7.—THE NORTH AND WEST FRONTS.

"COUNTRY LIFE"

official town house and the official income to support it, but also a choice example of those country homes which are England's glory, and with it the means to occupy it during his moments of leisure or to receive there his own and the Nation's guests. What the Nation might well have done Sir Arthur Lee now steps in and does—and does it *en grand seigneur*, in measure pressed down and flowing over. In little over an hour a future Premier will transport himself from the heat and bustle of the town, from the strife of Westminster and the toil of Downing Street to the pure, serene air of the Chilterns, of which the highest point, Coombe Hill, is on the property.

As Tennyson wrote of his own Isle of Wight home :

Where, far from noise and smoke of town
I watch the twilight falling brown
All around a careless-order'd garden
Close to the ridge of a noble down.

Passing through the gates, the grassy down whence the British stronghold overlooked the vale (Fig. 15) with box and juniper banks sweeping down to leafy hollows or velvet lawns, all exquisitely moulded and jewelled by nature, restfully enchant the mind and eye. Soon the russet brick of the walls, the grey stone mullioned windows, the gabled roofs break in on the scene, and the ample, homely grouping of the house (Fig. 5), with its court and garden enclosures, its setting of tree and flower, beckons hospitably. Its great oaken door opens wide and reveals the combined gloriousness and comfort of the interior. The past and present give of their best at Chequers. Art and Nature, Tradition and Progress have met to greet you there with influence benign and inspiring. The narrowness of active politics is expelled in favour of the breadth of view and comprehensive sympathy that a ruler of men should capture and hold. Not merely for convenience and luxury, but for psychological healthfulness, Sir Arthur holds that his gift will be valuable to the man who officially holds it, and therefore to the Nation whose destinies are temporarily in his hands.

The main features of the scheme are, therefore, designed not merely to make Chequers available as the official country residence of the Prime Minister of the day, but to tempt him to visit it regularly and to make it possible for him to live there, even if his income should be limited to his salary. With this object a sufficient endowment is provided to cover the cost of a permanent nucleus staff of servants, of keeping up the gardens and grounds, of maintenance and repairs, and other necessary outgoings. There is also a "Residential" allowance for the official occupant, calculated in a fashion deliberately designed to encourage regular week-end visits.

The whole estate, comprising some 1,500 acres, including the farms which Sir Arthur has taken in hand and brought from wasteful neglect to great productivity, from thistledom to corn-growing, is to be vested in a Board of ex-officio Trustees, actual holders of important posts in the domain of politics and of art. The farm lands are to be "leased rent free by the Trustees to the Board of Agriculture to be

maintained and run as a model or experimental farm and as a centre of up-to-date agricultural influence in the Chilterns." The woods are not to be destroyed, but cropped and replanted in accordance with the most approved methods of forestry. Most strict among the provisions of the Trust are those which ensure the unaltered preservation of the house and its contents. As to that Sir Arthur lays down the rule and gives the reason :

Another cardinal object of the Scheme is to preserve, so far as possible, the main architectural and archaeological features of the house and surroundings in their present restored condition. It will, therefore, be provided and strictly enjoined in the Trust Deed that no alteration,



Copyright. 8.—ON THE NORTH FRONT. — "C.L."



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9.—IN WILLIAM HAWTREY'S HALL.

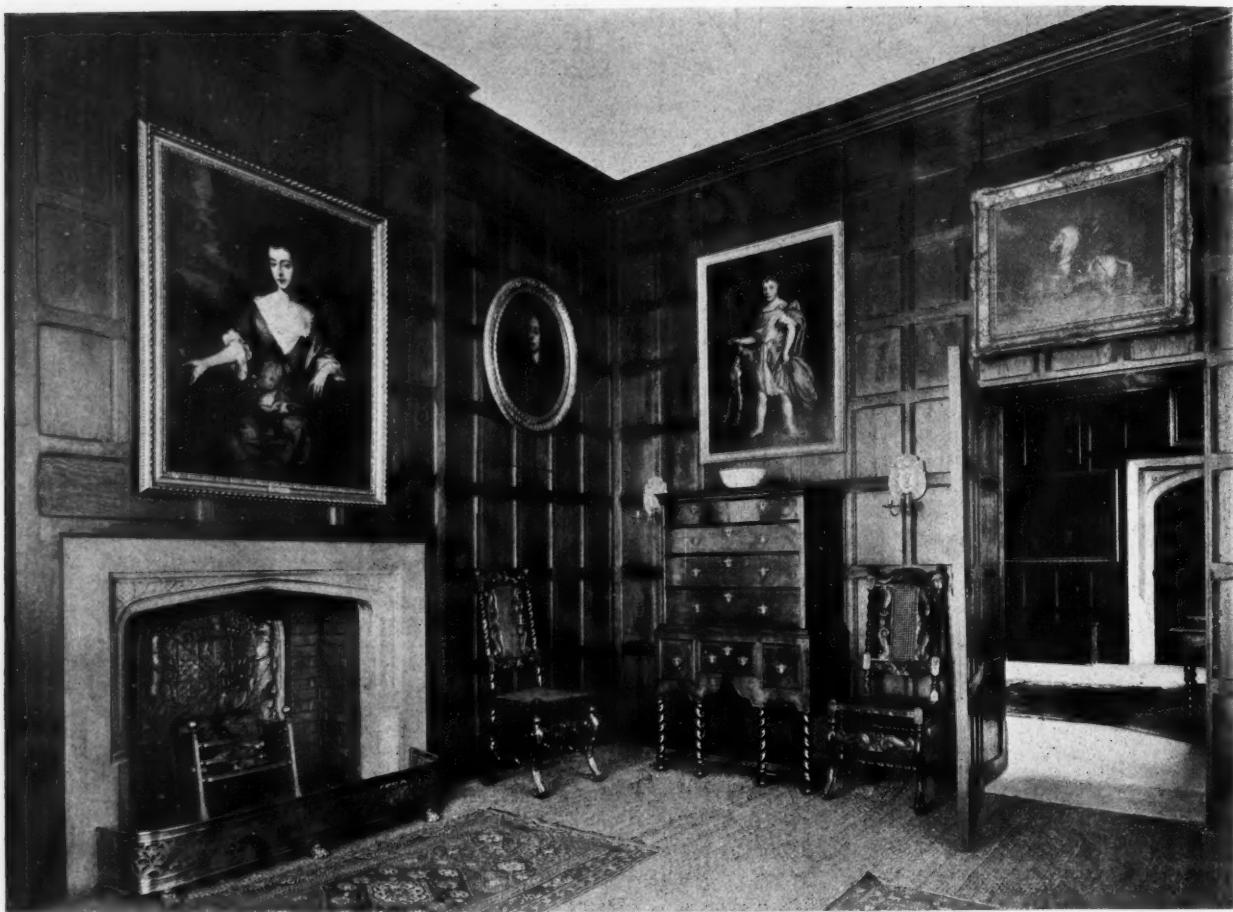
"COUNTRY LIFE."



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10.—THE HAWTREY HALL BAY AND GLASS.

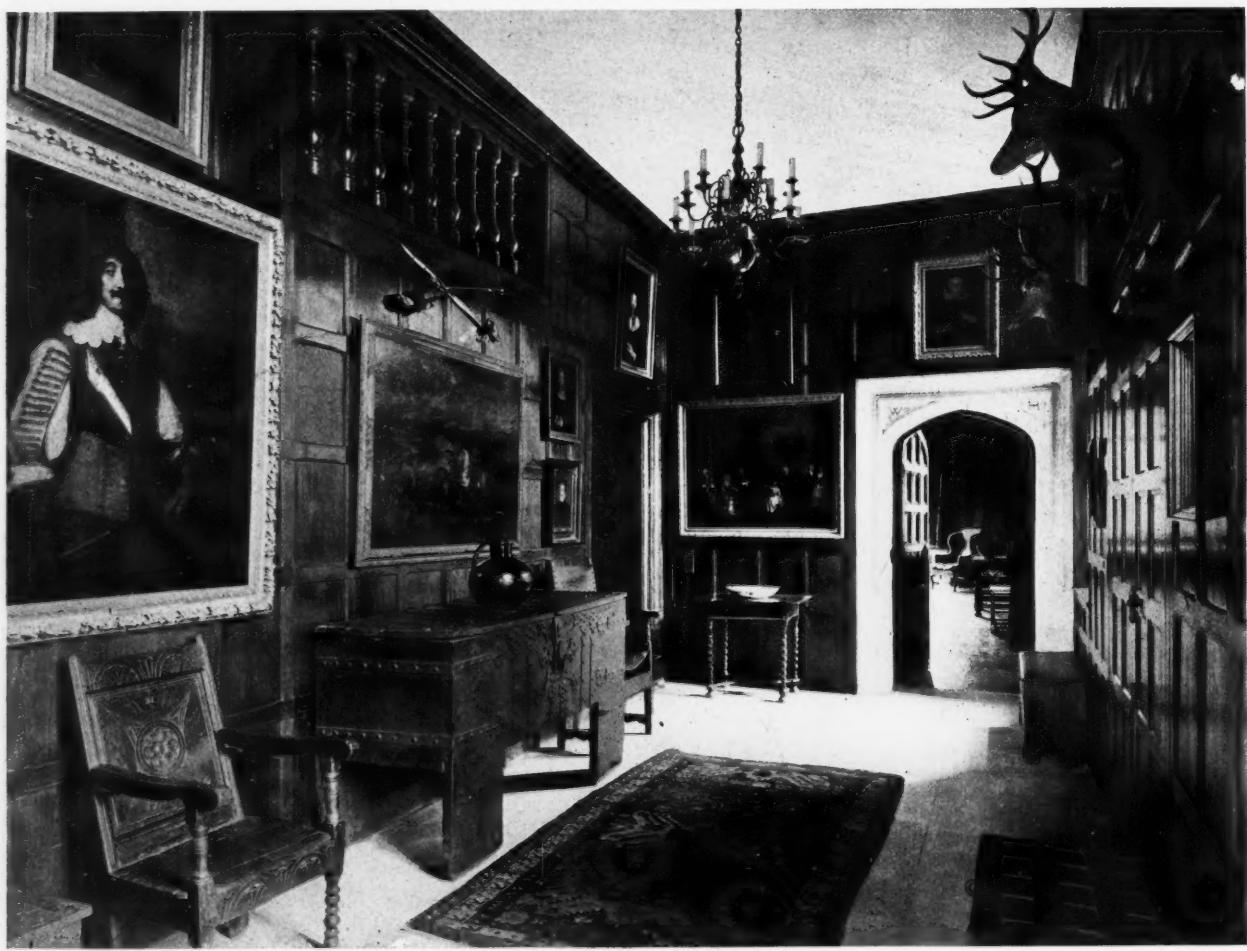
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11.—SOUTH-EAST PARLOUR.

"COUNTRY LIFE."



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12.—THE ENTRANCE HALL.

"COUNTRY LIFE."

mutilation, addition or subtraction shall be made to the principal features of the house.

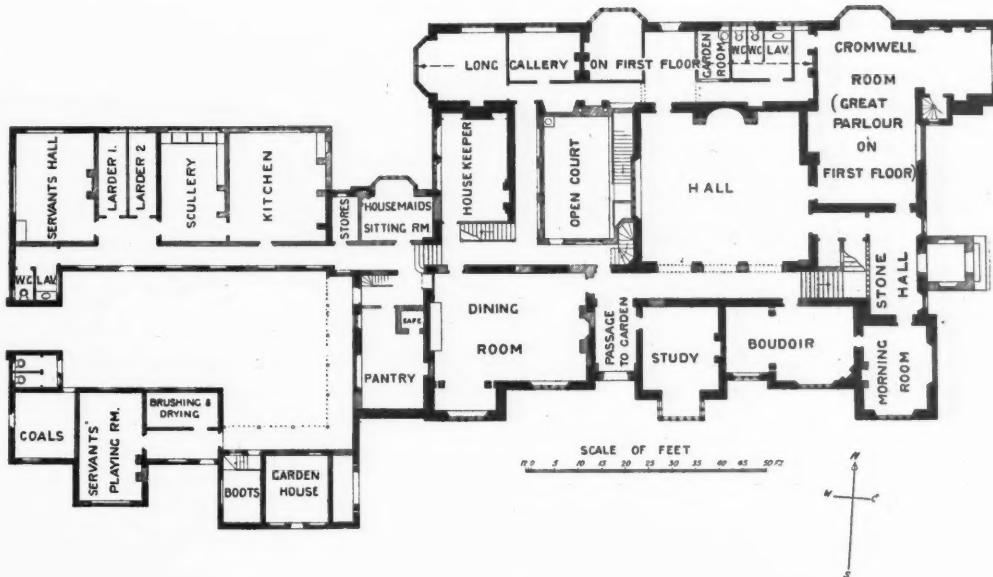
If the stipulations under this head should at first sight seem too rigid, it must be remembered that Chequers has passed through many painful vicissitudes in the way of "improvements and renovations," and that the recent restoration has been carried out under the best architectural advice, and with the primary object of bringing the house back to the appearance and atmosphere intended by its original builders. It is, therefore, desired to protect it against such outrages as were inflicted upon it by late Georgian Goths and Vandals and to preserve as long as possible its interior furnishings and works of art which represent the tastes, collecting enthusiasms, historic relics, and ancient belongings of its long line of owners from the sixteenth century up to the present day.

Such, briefly, are the scope and purpose of this gift. The generosity of its conception and the wisdom of its terms will be acclaimed by the whole Nation endorsing the appreciative view already expressed by the Premier who has written the following letter to Sir Arthur :

10, Downing Street,
Whitehall, S.W.
August 29th, 1917.

My dear Lee,—Your offer in regard to the Chequers Estate is most generous and beneficent, and one for which Prime Ministers of England in the future will have much to thank you. The gift which you are now bequeathing in advance to the nation is in its very essence an indication of the practical thoughtfulness which is characteristic of you, and the public spirit which the scheme displays is worthy of that which its originator has shown in all my dealings with him. Future generations of Prime Ministers will think with gratitude of the impulse which has thus prompted you so generously to place this beautiful mansion at their disposal. I have no doubt that such a retreat will do much to alleviate the cares of state which they will inherit along with it, and you will earn the grateful thanks of those whose privilege it is to enjoy it.

You have my full authority to go ahead with the scheme, to approach



13.—PLAN.



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14.—IN THE LIBRARY.

"COUNTRY LIFE."

the other Trustees, and to take whatever steps may be necessary to bring the Trust into effective existence.

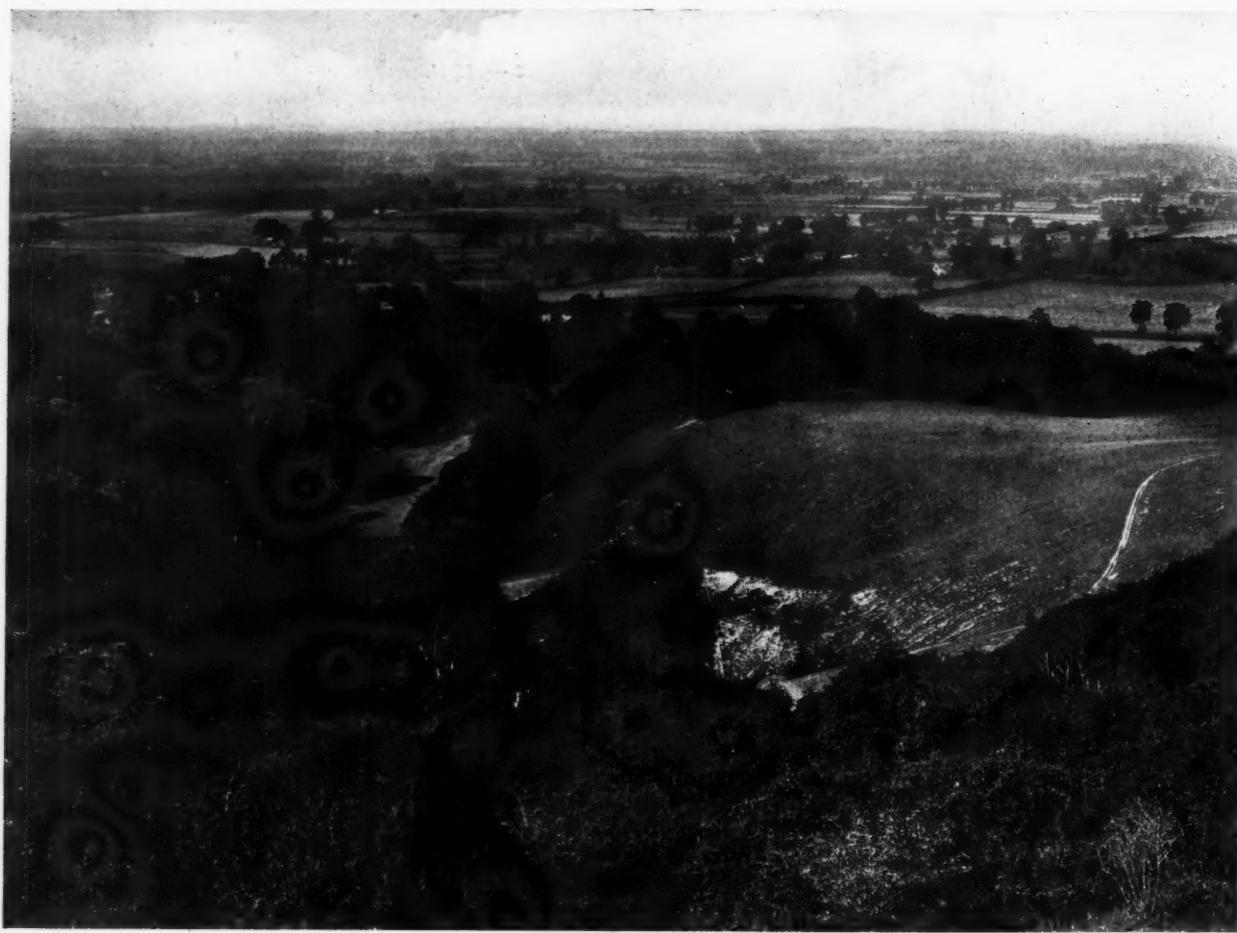
As soon as these preliminaries are completed, I shall be glad to attend and preside over the first meeting of the Trustees.

Yours sincerely,

D. LLOYD GEORGE.

Thus the future of Chequers is promising and important. Its recent use has been of much value, as many a convalescent officer will vouch (Fig. 16). Its past is varied and interesting. The exterior is still largely as it was left by William Hawtrey, who, in 1565, reconstructed his ancestors' fifteenth century home. But even the latter was by no means the earliest house of Chequers. That earthworks still clearly visible (Fig. 15) mark the British stronghold where Caractacus was born, rests not entirely on tradition but also on the survival of the two Kimble villages named after his father, the Cymbeline of Shakespeare, the Cunobelin of history, who brought all Britain south of the Humber under his rule. That Camulodumum (Colchester) was the centre of his rule does not prevent the hill in Chequers park having been a place of his occasional residence. Commanding as it does the Icknield Way (the oldest British road),

on his English Expedition does not appear. But the speculation proved fortunate, and we find broad acres in possession of various branches of the *Alta Ripa* family scattered over England in Plantagenet times. The husband of Katherine de Chekers hailed from Algarkirk in Lincolnshire, but will have been tempted south by his wife's inheritance, since Chequers thereupon became the home of the Hawtreys. Three of them, each in the manner of his time, have dealt with the fabric, for there is said to have been a rebuilding in the fourteenth, as well as those in the fifteenth and sixteenth centuries already referred to. A good deal of the fifteenth century material and fabric was retained by the Elizabethan Hawtrey, and the correctness of the little view of the house on an old estate map received notable confirmation by the discovery, when digging down for the sunk portion of the south garden in 1912, of foundations that bear evidence of being those of a gatehouse of late Gothic character, giving entrance to an outer "Court of Office" and faced by the main block of the dwelling, itself quadrangular in plan (Fig. 13). A quadrangle it remained when William Hawtrey remodelled it, but he will have superseded an arrangement dominated by a great



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15.—THE BRITISH STRONGHOLD AND THE VALE OF AYLESBURY.

"COUNTRY LIFE."

it was certainly a place of importance at the dawn of our era, although nigh upon twelve centuries have to pass before we can locate a positive owner. It was, under Henry II, the property of one Elias, an official of the Royal Exchequer at the very time when Bishop Richard of London, its Treasurer, gives us a picture of that most important and all-embracing department of the Government of our Norman and Angevin Kings in his *Dialogus de Scaccario*. Elias held probably one of the other offices mentioned in the *Dialogus*, and in any case it must have been his long and close connection with the Exchequer that made him known as *de Scaccario*, Englished as de Chekers, and thus gave him a surname which he transmitted to his posterity. If that be true, it was he and his office that gave name to his estate, and not the estate that gave name to the owner, which was the more usual course in his day. The male line of de Chekers ended with Sir Ralph's death in 1254, when his elder daughter, Katherine, carried the estate to her husband, Sir William *de Alta Ripa*, who thus became the first of the Hawtrey owners. What river's high bank, or Haut Rive, it was that a follower of William the Norman deserted in order to accompany him

and lofty hall for the Elizabethan one of a modest single-storeyed hall (Figs. 9 and 10) called Cromwell Room in the plan, and having a great chamber above it. Its bay window is the eastern one on the north side, of which all the rest on the first floor he allocated to the then fashionable long gallery (Fig. 14). That arrangement remains and the north elevation is still practically as he left it—a delightful composition of long, narrow, many-toned bricks relieved by the stonework of the coigns and of the stately array of double-transomed mullioned windows. The roof line is broken by five gables, of which two rise behind the bays (Fig. 7), which are only carried to two storey height and are topped by a parapet with round headed panels containing coats of arms, the initials of the builder and his wife, and the date 1565 (Fig. 8). It was in that year that Lady Mary Grey was handed over to his custody by Queen Elizabeth's order. The sanguinary dynastic struggle of the Roses' War, and the incompleteness of their own title to the throne, made the Tudor sovereigns jealous of any drop of Plantagenet blood in any veins but their own. Elizabeth did not chop

off heads and annex estates quite in the manner of her father, but she kept her most vindictive eye open towards her cousinry; and so, when the sister of Lady Jane Grey—who had for a moment displaced the Tudors—chose to contract a secret marriage with Thomas Keys, Her Majesty's Sergeant Porter, the royal temper at once overrode friendly or even compassionate feeling and Hawtrey received notice that Lady Mary was to be sent down to Chequers and not "go out of his house abrode, except it be necessarily for to take ye ayre for her helth." Even a system of food control was instituted and the little lady (she was as small as her husband was big) was not to be "dietet otherwise than shall be convenient for her sustentation." Hawtrey considered the safest plan of internment was under the roof, and the attic room occupying the north-east corner and approached up a newel stair (Fig. 9) has

traces of her handwriting on the wall. When she left Chequers, after two years' detention, she took with her to her step-grandmother, the Duchess of Suffolk, nothing but an old feather bed full of patches and a "lyttele petteous canype of ryde sersinette." It is to be hoped that the Queen's wrath was by then sufficiently appeased to enable her to listen graciously to the petition that furniture for one chamber and "some old selver potte to feche her drinke in" should be allowed on loan out of the Royal stores. William Hawtrey was the last male of his line to own

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16.—CHEQUERS



IN WAR-TIME.

"COUNTRY LIFE."

inheritance for a score of years and showed his gratitude by placing her effigy under a marble canopy in the neighbouring church of Ellesborough, although he may have wished to hint that there were consolations in widowerhood when he described her in the epitaph as having "nothing feminine about her except her sex." Certainly her portrait gives the impression of a woman of strong character capable of insisting on her own way.

So far to-day we view the annals of Chequers. Its later history will be "continued in our next." H. AVRAY TIPPING.

Chequers, which, on his death in 1597, passed to his elder granddaughter, Mary, Lady Wolley, who was herself succeeded in 1637 by her younger sister Brigetta, Lady Croke. As Lady Wolley, in her will made in the year of her death, describes herself as of Bodicote in Oxfordshire, she may not have resided at Chequers. But the estate map on which is to be seen the little presentment of the house is of her time, and has her name on it, and her portrait is one of the most interesting of the large collection of ancestors that hang on the walls. Though gaily attired in black and scarlet with embroideries of birds and flowers, her widowhood is proclaimed by minute black bows tied to her ring and to the pin of her ruffle. Her sister Brigetta outlived her for a year only; but the widower, Sir Henry Croke, member of a very important family of lawyer landowners in the neighbourhood, enjoyed possession of her

LITERATURE

A BOOK OF THE WEEK

WE are glad Mr. Dobson has compiled *A Bookman's Budget* (Oxford University Press). It is a miscellany to be placed on the bedroom shelf along with a few other favourites, so that he who has been wearied with the long day's task or bored with the effort to keep up that desolating small talk which is the currency of ordinary intercourse may dip into it, and not in vain, for a stroke of real wit that will kindle a double admiration by contrast with the clichés, the stale jest, the hackneyed story, of which ordinary conversation is made up. Or he may find an extract which one of the most cultivated and widely read men of our day has thought worth the trouble of transcribing. Or he may come upon an original poem dainty in form and fastidious in expression that yet says something individual to its author, rounded and finished, and as often as not set in an atmosphere of gentle melancholy hardly removed from pensiveness that charms one away from the dust and grime of daily life.

How shall we make good praise so exquisite? It is easier to give the general impression than prove its truth by extracted bits. For the book has no general intention save that the personality of Austin Dobson is, so to speak, the wavy line on which the items of the Budget are hung like clusters of ripe grapes. One opens the book at random and comes upon this example of wit, the neatness of which must command itself to the Dobsonian temperament in whomsoever it may be found:

A French savant of repute, being asked how he should render the reply ("Is life worth living?" "It all depends on the liver") in his own tongue, said at once: "Question de foi(e)" —an admirable example of translation which betters the original.

We need turn but a page or two to cull flowers equally fine, such as Newman's "Style is the shadow of a personality" accompanied by Pater's equally clear and pregnant "To the unembarrassing matter, the unembarrassed style," or Butler (1759) on the Minor Poet, "When he writes he commonly steers the Sense of his lines by the Rhyme that is at the End of them as Butchers do Calves by the Tail." If the author of "Hudibras" had been living to-day he could not have satirized contemporary poets with more scathing exactness.

Austin Dobson became a member of the Athenaeum Club in 1891. Abraham Hayward had then been dead for nine years, but it was not too late to gather together a few traditions about that most excellent of after-dinner *raconteurs*. From a fine little notice we extract the following:

When Lord Westbury appeared for the first time in the House of Lords after his fall, in plaid trouser, "There he is," said Lord Chelmsford, "scotched, but not kilt. . . ." A dinner at the Athenaeum (Dean Boyle goes on), with Hayward, Sir W. Stirling-Maxwell, and Sir Edmund Head, was a thing not to be forgotten. Anecdote followed anecdote in pelting profusion. Hayward said that among the many witticisms of Sydney Smith, he thought one of the best was, "Man is certainly a benevolent animal. A. never sees B. in distress without thinking C. ought to relieve him directly." "Helps," he said, "declares that the king of proverbs is, 'Nobody knows where the shoe pinches but the wearer.'" After a profound silence, Stirling-Maxwell and Head, both masters of proverbs, declared that they believed he was right. Haywardiana ought to have been attempted by someone who constantly dined in his company. I heard Thackeray say that he had counted on one occasion fifty-five stories, and he did not think he had ever heard Hayward tell one of them before. It has been said that if the original of the first part of *Faust* had perished, it might almost be recovered from Hayward's prose translation. (*Recollections*, 1895, pp. 278-80.)

Our author's literary gift had been sharpened on eighteenth century literature. From it he learned to be

simple, concise, clear and to have one especial hatred, the nature of which will appear from the following paragraph:

THE LONG SENTENCE.

This is at once defined and exemplified by Helps, Ch. vii of *Realman*, 1868, in a passage of eighteen lines (*v. Earle's English Prose*, 1890, 210). But the champion specimen is in Hazlitt's *Spirit of the Age*, 1825. Writing of Coleridge, he contrives "to spin out a single sentence to one hundred and ten lines. It contains the word 'and' ninety-seven times, with only one semicolon, and is probably the longest sentence in any author, ancient or modern." (MEIKLEJOHN'S *Art of Writing English*, 1899, 243).

And now what shall be given of his verse? Surely nothing shows the mettle of his parlance more than the graceful lines, "For a closing page," as manly and cheering a deliverance about the end of all as is to be found in literature. We quote the first verse and the last five:

FOR A CLOSING PAGE.

"Never a palinode." "Q."

LIFE, like a page unpenned,
Spreads out its whiteness;
Nothing, from end to end,
Marring its brightness.

Yes. For it still was good,
Good to be living;
Buoyant of heart and blood;
Fighting, forgiving;

Glad for the earth and sky;
Glad—for mere gladness;
Grateful, one knew not why,
Even for sadness;

Building a larger scope
Out from successes;
Finding the ray of hope
Gleam through distresses;

Blithe to the close, and still
Tendering ever,
Both for the Good and Ill,
Thanks to the GIVER.

• • •
So, though the script is slow,
Blurred though the line is,
Let the poor record go
Forward to FINIS. A. D.

CORRESPONDENCE

QUEBEC HOUSE.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—A propos of your article on General Wolfe and Quebec House which appeared in COUNTRY LIFE of Sept. 15th, may I venture to express my surprise that no mention is made of the late tenant of the house, Major Beckles Willson, who occupied it from 1907 to near the outbreak of war, and who is now serving on the General Staff in France. Major Willson was not only the indefatigable biographer of Wolfe, but has done more than anyone now living for his memory; and it is to him that the revival of the Wolfe Dinner and the statue at Westerham are due. When Major Beckles Willson was compelled to leave England, his friend and compatriot the late J. B. Learmont of Montreal purchased the property, and his widow, I believe, presented it to the nation. It is now vested in the National Trust. Mr. W. Aylward is the temporary tenant, and is no connection of the male branch of the Wolfe family of which I am a member.—ARTHUR WOLFE.

THE BUTTERFLIES OF 1917.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Perhaps it will interest you and your readers to hear that a Camberwell Beauty (*Vanessa antipa*) was caught in a garden two miles from Bolton Town Hall. It is now in the Chadwick Museum (Bolton), and is a finer specimen than those already there. Is not this butterfly very rare in Britain, and especially so far north as Lancashire?—A. G. R.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—I shall be so much obliged if any of your readers will kindly tell me if they can name a butterfly I recently saw in the garden here (Bracknell, Berks). It must have been at least 4½ins. to 5ins. across its wings, was quite black and had long points to its wings. It flew about very hurriedly, but returned several times to one spot. I have also seen a smaller butterfly, quite black with large white spots on each wing. This had no points. The butterflies here have been very numerous this summer—dozens at one time on a bed of asters.—LILIAN STAPLETON.

THE FUTURE OF THE BRITISH MOTOR INDUSTRY.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—In last week's issue, with reference to the future of the British motor industry, Mr. T. Landear Lucas asks "reasonable men what is the remotest possibility of erecting a protectionist wall against any of the products of the United States after the war, in view of our close alliance and financial relations with that great nation." Surely the answer is that there is exactly the same possibility of it that there is that the States should erect or preserve a protectionist wall against Britain. Sauce for the goose is sauce for the gander.—G. O.

NORFOLK "BIFFINS."

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—I am much obliged to you for inserting my request for a recipe for Norfolk "Biffins," but am sorry to see I did not express myself clearly. "Biffins" are not a variety of apple, but a way of drying them. In my childhood old women would come round to our cook and say they had such a good crop of fine apples, they were going to "biffin" them and would we like to buy some. They were a dark brown colour, rather sticky, and (I think) had been cored.—A. B. C.

[We are unable to find out much about the old custom of "biffing" apples. The generally accepted word is "Beefing," meaning beef-like. Lindley says the apples are dried in the oven after baking, and we hear that this was also done in parts of Kent. The Norfolk Beefing is a well known variety of apple, a particularly good keeper, and this was the special one

to dry. We have a way of turning anything into a verb in this country, and we suspect this was done by the old ladies referred to by our correspondent. Incidentally, may we ask if this throws any light on that popular verb "to biff"? —ED.]

JAM MADE WITH GLUCOSE.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—I should be glad if you could tell me if there is any way in which I could prevent jam made with glucose from having a peculiar bitter taste. I have made jam with ripe yellow plums, red plums and apples, separately, using a quarter of a pound of sugar (white) and a quarter of a pound of glucose to a pound of fruit, and boiling the jam for an hour and a half in each case; but all the jam has the same bitter taste, which is to some people most objectionable. Also, could you tell me if the jam made as above and containing such a proportion of glucose is at all injurious if used in the ordinary way? —D. PAULL.

[Glucose should have no bitter taste. It is a main constituent of many of the commoner "sweets," and is much used in normal times in place of sugar in various industries. The jam is certainly not likely to be injurious because of its content of glucose. Is it possible that the plums themselves had a bitter flavour? They sometimes have through the attack of fungi upon them.—ED.]

A WILD BLUE FLOWER TO NAME FROM NORTHERN FRANCE.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—I am writing to ask if you or any of your readers can identify the plant which I am now going to try to describe. It is not particularly common, and is found growing in some of the uncultivated spots of Northern France. The flowers are of a pale clear blue, a shade or so lighter than that of the common cornflower, and are single and not unlike, in shape, the common pink pyrethrum, only without the daisy-like centre. They are about an inch and a half across. The plant itself is of an upright bushy nature, growing about 3ft. high, but varying in different soils. There is a main stem with numerous side branches. The flowers are produced all the way up the stems and branches at intervals of about 1in. to 2ins. apart and usually in groups of five, very seldom more than one flower of the five is out at the same time, so that the plant lasts in bloom a considerable time. There are usually a few leaves and generally they are at the bottom of the stems. I give a tracing of the leaf. A well grown plant in full bloom is very noticeable. I saw one growing last year in Belgium, but have never seen it in England. A handsome plant like this seems worthy of further cultivation, especially as there are none too many varieties of real blue flowers.—B. H. S., R.F.A.

[From the above description, together with a sketch of a leaf of this plant sent by your correspondent, there is little doubt that wild chicory (*Cichorium Intybus*) is the plant in question. It is found in many parts of this country in waste places. It is one of the weeds of cultivation, that is to say, it is found on cultivated or disturbed ground or in waste places near it, and seldom anywhere else.—ED.]

ENGLAND'S FIRST POTATO: WHERE IT WAS PLANTED.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—In view of its present extreme importance in the national economic life, it is interesting to record that, according to still existing local tradition, the first potato in England was planted by Sir Walter Raleigh in the garden of an old manor house in the village of Colaton Raleigh, in East Devon, some three miles from his birthplace at Hayes Barton. The village nestles in a little valley through which runs a brook rising on Woodbury Common, and half way between the modern road and the site of the old ford placidly lies the little demesne where England's first potato was planted. Forming part of the parish glebe lands, it is now known as Place Court Farm, the old house still retaining most of the essential characteristics which it possessed

in the spacious days of great Elizabeth. It was in the little chapel (measuring but 9ft. by 7ft. 6ins., but with a height of 13ft. in the centre of the barrelled ceiling) that Sir Walter Raleigh is said to have been baptised, although the records of the adjoining parish of East Budleigh contain an entry of the christening there. There is a possibility that there were two baptisms, one in the church and the other in the private chapel. Two theories are held to account for the Colaton Raleigh tradition. One is that the house



WHERE SIR WALTER RALEIGH IS SAID TO HAVE PLANTED THE FIRST POTATO.

was occupied by intimate friends of Sir Walter Raleigh's parents; the other is that the residence as an appanage of the Exeter capitular body (it was long known as "The Dean's Manse") was often the resort of high dignitaries, whose conduct of Church rites was sought by well-to-do families as conferring a special social status on those directly concerned. In support of the tradition that Sir Walter was christened at the old house there is the fact that the residence which in after years he built for himself at Youghal, in Ireland, is a replica of that at Colaton Raleigh—evidence that he had some very special regard for the picturesque Devonshire home. It is in a corner at the further end of the garden, and within a couple of yards of the ancient road leading to the ford across the river Otter, that tradition says Sir Walter Raleigh planted the first potato to be propagated in this country; and it is interesting to note that the same spot has this year again borne potatoes. In such a cosy corner, with the cob wall giving immediate protection from north and east winds, and high land in the same directions exercising a more expansive sheltering influence, Raleigh's precious tuber from Virginia had an ideal locale for its propagation; but however keenly interested he may have been in its fate, he could have had not the faintest idea of the enormous importance of its successors at a critical period in his country's history.—A. E. RICHARDS.



THE RIPPLED SANDS OF THE DESERT.

after a "Khamseen" wind shows how the force of the wind blows the fine sand, making the surface almost as hard as the sand on a seashore.—P.

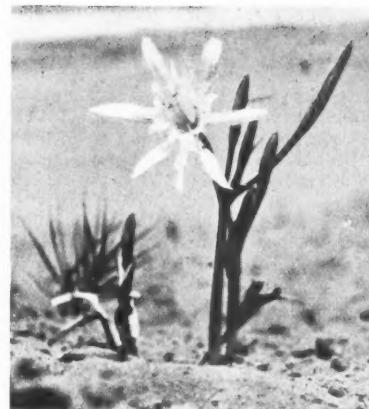
THE PASSING OF BEACHLEY.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Everyone will sympathise with the inhabitants of the peaceful and secluded little Gloucestershire village of Beachley, who, if newspapers are to be believed, have received brief and peremptory notice to quit forthwith the homes in which not few of them have passed the greater portion of their lives. Beachley lies, as all the world has lately learnt, between the Severn and the Wye, some two miles below Chepstow, a town which has recently found itself transformed into a building place for mighty merchant ships and, as I hear, is destined to become a "garden city" of the West. The Beachley peninsula is flat, and tapers gradually to Beachley Point, the meeting place of Wye and Severn—streams, it is not amiss to note, which have their birth upon the same hillside, although their courses for most of their length lie so far apart; the sources are within a mile or so of each other on the slopes of old Plinlimmon, "Father of Waters" indeed. A few hundred yards from the Point is the "Rob Seint Tryakle," locally known as Treacle Island—island at high water only, though at all times somewhat difficult of access on account of the tenacious Severn mud which intervenes. Tecla, Terendica, Teraclius, such is the varying nomenclature of the saint or hermit, the sex wholly doubtful, who in far-off times resided there; the walls of the small cell may still be seen. Of modern interest is the little beacon which the keeper daily lights at dusk. At the end of the village itself, before crossing two fields to the Point, is the "slip," a busy place in coaching times at certain hours of the day. For the main route from London to South Wales then ran through Bristol to Old Passage on the Severn's farther shore. There passengers and mails were ferried over the swift, treacherous stream, found a coach waiting, and resumed their way by land. You can still hear in Beachley of the lamentable accident of many years ago—the boat upset on a September evening, and its load of horses, sporting dogs, and human beings all lost. The rise and fall of the tide is here abnormally great, and, to the ignorant, would seem to militate against the present purpose of the site. It militated against bold Prince Rupert on an autumn day of 1644. He had entrenched and fortified the place; King's ships were in the river and the Royalist position seemed secure. But Massey waited till the falling tide had placed the Royal fleet at such a level that its cannon could not fire on the flat field.



A SOUTH AFRICAN MOUNTAINEER.



A FLOWER FROM PALESTINE.

BULBOUS PLANT FOUND IN THE SAND CLIFFS IN PALESTINE.

[TO THE EDITOR.]

SIR,—I send a photograph of a lily which flowers freely and covers a large area of the sand cliff near the sea, three miles south of Gaza in Palestine. Can you name it? It does not grow away in the desert or inland. I understand the old Roman caravan road passed along this route once.—M. PORTAL.

[This is identified as *Pancratium maritimum*, a bulbous plant with very fragrant flowers and belonging to the natural order, Amaryllidaceae. It is widely distributed in its wild state, being found all along the Mediterranean Coasts of South Europe, Asia Minor, Syria, Palestine and Egypt. It is one of the very few *Pancratiums* that in the milder districts, such as the South-Western Counties, may be grown in the open in England. Except in favoured places in this country, it would require the protection of a cool greenhouse.—ED.]

AFTER A "KHAMSEEN" WIND.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—The enclosed photograph taken of the sand hills in Palestine the day

He then attacked, took Beachley and razed every house. So that the little church dates from no further back than 1833, and you may look in vain just here for those old houses in which Gloucestershire is elsewhere rich. It would take too long to describe in detail the construction and working of a "putcher," a peculiar salmon-trap of this district which is, I believe, found nowhere but on the Severn, and of which I was allowed to give particulars in COUNTRY LIFE for March 21st, 1908. So one word more and I have made my moan for little Beachley which I used to know so well, where I have passed so many happy sunny hours at the Point, the "slip," or underneath the fossil-yielding cliffs of Sedbury Park. It is surely a curious fact that, in Lieutenant-Colonel Marling's house of Sedbury Hall, only cut off from Beachley by the southern end of Offa's Dyke, and once the home of Eleanor Ormerod, the "farmer's friend," there is a kind of forecast of what now has come to pass; the picture of a great barrage projected for this portion of the Severn in the earlier half of the last century. Great ships are floating in the dammed-up stream! Little we thought, the Colonel and myself, when he exhibited this "curiosity" before my eyes, that something of the sort would really be within a few short years. I must apologise for undue length; but few know Beachley as I knew it, and one does not see an English village wiped out every day.—ARTHUR O. COOKE.

AN OUTDOOR GRAPE.

[TO THE EDITOR OF "COUNTRY LIFE"]

SIR,—I am sending you a photograph of a tree of Moore's Early Grape. This is a useful hardy black grape, ripening early out of doors. The berries are sweet and yet have an astringent quality that reminds one of the strawberry grape and suggests a North American origin and possibly some connection with *Vitis labrusca*; but on this point I would ask for correction. The



MOORE'S EARLY GRAPE TRAINED AGAINST A SHED.

leaves, rather widely spaced upon the branches, are for the most part undivided though some of them are bluntly three-lobed.—J.

ELMS THROWING UP SUCKERS.

[TO THE EDITOR OF "COUNTRY LIFE"]

SIR,—I am writing to ask what you advise as to the best course to pursue. I find several elm trees in my park have this year taken to throwing up suckers at quite a long distance from the tree and to the height of 2ft. or more, which is most destructive to the pasture. They have never done so before, or, at any rate, to nothing like their present number or size. How can I stop this? I am having them torn up with a pick. I should be much obliged for any suggestions as to what to do to stop this happening again. I wonder if any of your other readers have had similar trouble this year.—A. F. S.

The throwing out of suckers by elms is very common. This happens for various reasons, such as the roots in the soil having been injured in one way or another, or simply because the roots come near the surface. The suckers are easily killed by ringing near the surface of the soil while they are growing. A width of 1in. of bark taken off will be sufficient. Using the pick will probably not do much good, as next year the same thing will happen and the suckers probably appear in greater numbers.—ED.]

THE DANDELION WHICH GREW UPON ITS HEAD.

[TO THE EDITOR OF "COUNTRY LIFE"]

SIR,—In your issue of May 26th you published a photograph of a dandelion "growing on its head." Evidently it had been turned upside down in digging over the bed and had produced a new head of leaves at the root end, and was endeavouring to produce leaves at the buried crown. After taking the photograph I planted the dandelion again, and now, after three months'

growth, I send you another photograph which, though a poor one, shows the very determined nature of the plant. In the first photograph it was shown that when the plant was in its normal position it had been hoed over and had then shot out several new heads, which, when it was buried upside down, produced new leaves underground. In the photograph I send now you will see that these new heads have now bent upwards, reached the surface, and have shot out luxuriant leaves and one flower. The original head, growing from the old root-end, is on the right. Note that the roots are all growing upwards, at all events, at their bases, showing the persistent "polarity" of the stem.—ROBERT GURNEY.



THE ORIGINAL CROWN IS NOW THE BASE OF THE STEM.

PARTRIDGES AND AEROPLANES.

[TO THE EDITOR OF "COUNTRY LIFE"]

SIR,—Being much engaged on munitions of war and only able to snatch a few hours occasionally for recreation, I took a small shoot this year within easy reach of my business. The other day I happened to say that I wondered what would be the effect of an aeroplane over birds. The next day being Saturday, I went out with three other guns for a little shooting. We found the birds fairly wild, and having put some into a grass field, proceeded to take it in a way to get them back into the roots. On entering the field an aeroplane came into sight, and in a few minutes was over our heads as we walked. The grass was not over long, but a covey of about sixteen partridges got up literally under my feet. I am convinced that this would not have happened had it not been for the plane above us. It will be interesting to know if others have had a similar experience.—J. T. A.

FUNGUS TO NAME.

[TO THE EDITOR OF "COUNTRY LIFE"]

SIR,—Will you let me know through your paper if the enclosed is a "truffle" or edible fungus.—OATS.

[The fungus sent is not a truffle (*Tuber aestivum*), which has a rough surface, but *Bovista nigrescens* one of the small puffballs. We are not sure if it is edible or not. The large puffball (*Lycoperdon gigantum*) is esteemed as an article of food by many. It has often been referred to in our pages, and not long ago we published an illustration of one puffball so large as to suffice for a meal for ten or twelve persons. The puffballs are so named because of the abundant brown dusty spores like snuff which are emitted by pressure when the plant is mature. The puffballs cease to be edible when they begin to turn brown.—ED.]

A NOVEL BULB GARDEN IN A POT.

[TO THE EDITOR OF "COUNTRY LIFE"]

SIR,—Perhaps these photographs of a novel bulb garden in a pot and of the way in which such a pot is fashioned may be of interest to those of your readers who make it a practice to grow bulbs for the brightening of dark winter days.—L. B.



THE PERFORATED POT. FULL TO OVERFLOWING?